Within the UK, the Covid-19 epidemic has had a profound impact on the National Health Service, precipitating faster and more wide-ranging changes to the health care system than at any other time in the service’s history. Set against a backdrop of health systems in other countries becoming overwhelmed with critically sick Covid-19 patients, the NHS set about reconfiguring its services to free up and create additional intensive care bed capacity, postpone or divert non-Covid patients elsewhere, and draft in thousands of additional professional staff.

Searching questions will need to be asked about the UK’s overall Covid-19 response, in particular around testing, supply of protective equipment, care home policies and the large numbers of excess deaths. But there can be no doubt that the rapid changes made by the NHS to increase the supply of intensive care beds and capacity were impressive and, in combination with the lockdown measures, avoided similar scenes to those seen in Lombardy and New York’s health systems in February and March.

Now, as the number of Covid-19 hospital admissions gradually declines, policy attention is turning to how the NHS can restart some more routine activities, with hospitals beginning to resume elective surgery and cancer treatments. But doing this while living alongside Covid-19 will involve major practical challenges that will need to be overcome. It will inevitably have a large negative impact on the ability of the NHS to deliver what it was able to offer previously. This could mean the public having to accept reduced services, health and care staff facing continued and long-term changes to their ways of working, and difficult choices ahead for policymakers in accepting a degree of rationing of health care that would previously have been seen as unacceptable.
We have been discussing the implications of this with a number of representatives from different parts of the NHS, including leaders from a teaching hospital, single and multi-site hospitals, community services and primary care. Similar issues are also arising in mental health and ambulance services, but these are not within the scope of this short discussion paper. We also investigated what health leaders in China and Portugal have been experiencing, in order to get some international perspectives.

People are only just starting to think about the implications discussed here, so what follows is not comprehensive, nor will it necessarily reflect the eventual end point for the NHS.

Our work found that leaders expect that:

- For patients requiring help in an emergency, staff will need to assume they are Covid-19 positive, requiring enhanced PPE and significant extra time for cleaning beds, imaging equipment and operating theatres between patients.

- Without a quick and reliable test, patients needing planned surgery will have to be swabbed and required to self-isolate before planned investigation or treatment with a further test immediately before. This will have a large impact on the system, slowing down basic processes and treatments.

- Staff in high-risk categories may need to be removed from front-line duties, further exacerbating the shortages that predated Covid-19. Daily work for those remaining will be onerous – from changing in and out of PPE, to administering tests and changing daily practices – all reducing the amount of work they can do.

- These changes do not just apply to hospital staff. In many services like dentistry and general practice, direct physical contact between the patient and the professional is needed. Dental practices could face financial ruin as they have to don full PPE and clean rooms between patients.

- GP surgeries have made great strides in rolling out more virtual treatment and consultations, but these are not a panacea: there are limits to what can be done virtually.

- The building and design of many English hospitals makes them unprepared for the kind of infection control needed in the coming months. The NHS has large numbers of older hospital buildings, which include
shared accommodation and narrow corridors. That will make segregating Covid and non-Covid patients very difficult.

There is a great amount of uncertainty ahead as policymakers and NHS managers grapple with the aftermath of the peak of Covid-19 cases. A number of developments could significantly change the picture described in this paper, including:

- the development and successful roll-out of an effective vaccine against Covid-19
- the widespread introduction of a cheap, rapid and highly sensitive test able to correctly identify patients who are actively infectious
- the successful introduction of a reliable and affordable antibody test*
- the effective elimination of the virus from community transmission.

At the time of writing, most of these potential developments seem some way off. The issues described below assume a continuation of the UK’s current scenario – with no vaccine, limited but expanding testing, and unanswered questions over antibodies and immunity.

**Hospitals**

Senior hospital staff have identified a number of daunting logistical problems associated with adapting to life with the virus, meaning that hospitals will have to operate at lower levels of activity than was the previously the case. This is because many of the measures required to create safe ways of working will reduce the number of beds, the capacity in emergency departments, diagnostics and theatres and the number of patients that staff can treat. There will be long-term implications for waiting lists, the configuration of services and what the NHS will be able to provide – access to some services will be restricted, and in some cases very heavily. This raises very significant management and policy challenges, particularly in relation to infection prevention and control, staffing, building design, and facilities management. Each of these issues is discussed in turn below.

* Assuming there is already a relatively high rate of community exposure to the virus and that immunity is conferred and persists.
**Infection prevention and PPE**

Where it is not possible to test before treatment, it will need to be presumed that all patients are infectious until proven otherwise.

This will mean staff using personal protective equipment (PPE) for all contact with these patients, even for outpatient, ambulatory care and other care not requiring a hospital bed, where it would previously have been presumed that patients are relatively well. This could pose particular problems for any standard investigation or procedure – equipment will need to be cleaned after every use with a patient. This will slow the journey of a patient through hospital, and it also has a number of other implications:

- **Patients booked in for surgery will need to be tested prior to admission.** This adds additional costs and steps into the process of care, as well as creating another obstacle for the patient receiving care. If the test cannot be done on the day of surgery or the day before, there is an increased risk to patients and staff.

- **All aerosol-generating procedures (those that increase the likelihood of patients producing respiratory secretions) will still require enhanced PPE and cleaning between patients.** Cleaning would need to include allowing time between operations in theatres (depending on the air changes created by the ventilation systems) where the infection status of the patient is unknown.

- **Many hospitals have insufficient staff changing, locker and shower facilities to allow adherence to best practice regarding the use of scrubs and changing out of uniform before returning home.**

- **An expansion of hospital activity back towards the levels of the pre-Covid-19 era will also require a larger amount of PPE.** Experience to date, with supplies taking a long time to reach the front line, shortages of specific items, and a loss of faith among many staff in the government’s handling of this means that there will be work to do to provide reassurance that this is going to be reliably available in future.

**Staffing and capacity**

In addition to the above infection control issues, a number of aspects of the new ways of working will have implications for staff themselves, the productivity of the wider system and the way that services are organised.
Staff in high-risk categories may need to be removed from front-line duties, or at least those where they may be exposed to risk. While these staff can be trained to carry out other important duties, such as telephone consultations, this will nonetheless increase the burden on the remaining front-line staff.

Just the process of using PPE – changing in and out of it and the associated cleaning and washing – adds time to each transaction and places an additional burden on staff. While each step of the process may be relatively small, the sum of all of these steps will use up a lot of time that was previously available for patient care.

Hospital leaders noted that it is often more productive for one member of staff to put on PPE and carry out several tasks that would previously been spread across different members of the clinical team and support staff. This will require the logistical redesign of working patterns and job roles. However, unfortunately it also implies some staff remaining in PPE for long periods, and chief executives are concerned that staff find this very tiring and unpleasant. This has been tolerated to a certain extent during the crisis, but changes to work practices and rotas will surely be necessary in future.

Hospitals needing additional staff capacity in intensive care will require support from anaesthetists who, as a result, will not be available for routine operations elsewhere in the hospital.

More generally, clinical models that require clinicians to move between areas – e.g. to come to A&E to review patients or to visit multiple sites – may need to be reviewed. This may have an impact on the agility and productivity of the system.

Staff will need to be tested frequently, which has significant implications for cost and time.

Buildings and facilities

All of the above infection control and staff capacity issues are strongly affected by the way hospital buildings themselves are designed and created.

The aim of good hospital architecture has generally been to create ‘loose fit’ design and generous circulation space to aid the flow of patients through buildings. Unfortunately, the NHS has not always followed this and there has
been a history of eliminating much of this space in NHS building schemes to reduce costs since the 1970s. This has had several consequences:

- Unlike many other countries, the UK has not created many hospitals with a majority of single patient rooms, and a lot of hospitals are made up of older buildings built with shared accommodation. In the latter cases, given the spread of Covid-19, patients coming into hospital will need to be organised into high-risk and low-risk cohorts. Where infectious patients need to be grouped on wards, physical space constraints and shortages of handwashing basins, particularly in ward corridors, mean that additional facilities may need to be created to ‘don and doff’ PPE, sometimes at the expense of actual bed spaces.

- Narrow corridors, which are often another result of cost savings, and ‘race-track’ designs (where access to one ward or department comes through another) also limit options for keeping flows separate and allowing for distancing. One chief executive described the serious logistical difficulties of transferring a Covid-19-positive patient from one part of the hospital, requiring the whole corridor to be closed for a period.

- Prior to the outbreak, many emergency departments were working well above their design capacity and do not have waiting areas that allow for social distancing. They also often have small numbers of isolation and single rooms and a limited ability to create separate organisational flows for infectious patients coming through the department. This means that some hospitals will need to continue to use other facilities to create parallel assessment units on a longer-term basis. This would also mean staff cover would sometimes need to be duplicated. Some space could potentially be released from outpatient areas liberated by a shift to more phone consultation, but in some cases it will use space required for other clinical activities and so reduce capacity.

- The UK started the crisis short of intensive care beds, and the design of some intensive care units has proved unsuitable for segregating infectious patients. This has meant that additional capacity and the ability to cohort patients has been created by using spaces normally used for other clinical activity, with organisations converting theatre, recovery and endoscopy suites into intensive care units. Again, the need to separate infected and non-infected patients will have major implications for the potential to use these spaces in the longer term.
Additional capital investment will be required in order to separate the flow of infected and non-infected patients through hospital – for example, to provide extra imaging capacity and waiting areas, or to provide lifts to allow for more social distancing and direct access to facilities in multi-storey buildings.

While many hospitals have generously provided meals for hospital staff, in the absence of other places to buy food the pandemic has revealed the poor provision of communal spaces in which people can safely eat while maintaining social distancing.

Managing hospital workload

The potential for a second wave of Covid-19 infections and the immediate issues set out above mean that it will be necessary to run hospitals at lower rates of occupancy than have usually been the norm – aiming for 75–80% rather than 92% and higher.

There are upsides to this: it would be likely to reduce health care-associated infections and help to ensure that patients are placed in the most appropriate specialty beds, which could in turn improve outcomes and reduce length of stay. However, it would also have implications for the number of patients that can be treated.

The NHS will not be able to return to anything like the previous volume of elective care in the foreseeable future, and there will be a relatively slow start. Continued use of private sector capacity will be required in order to help to make up the shortfall, but even with this, waiting lists will continue to grow.

A point of care test would help, but there will still be challenges for patients requiring immediate treatment. Depending on the confidence staff have in the test, additional precautions may still be taken in high risk areas such as ear, nose and throat (ENT), ophthalmology, oral surgery and specialties using endoscopy given the potential for transmission of the virus in these areas. There will be a similar issue for diagnostic services due to the need for separation and decontamination that will slow workflows and reduce efficiency. Some diagnostic approaches cannot currently be used for patients who may be infectious – for example, lung function testing, which is essential for diagnosing conditions like COPD and essential for monitoring and determining the best approach to treatment. In such contexts, new diagnostic
approaches may be needed. Without this there is a risk of poorly diagnosed and managed respiratory patients needing better investigation.

The waiting list for planned treatment was already over 4 million going into the Covid-19 outbreak, and at that point approximately 1.6 million people a month were starting new care pathways. Most of these people have not had their treatment moved forward since the end of March. This, combined with the effect of the overall productivity losses described here, means there will be very large increases in the numbers of patients waiting for treatment once GP referrals return to more usual levels.

Prioritisation of elective work may therefore be necessary, and even so it may not be possible for some patients’ care to be provided at all for some time. Given this gap in services it would be sensible to manage waiting lists across areas and between different health care providers, particularly if there is going to be shared use of the private sector or ‘cold’ sites (for patients who do not have symptoms of Covid-19).

Turning to urgent care, the reductions in emergency department attendances have permitted some respite and created space for Covid-19 patients, but it has also created a backlog of health problems where demand has been suppressed because patients have been reluctant to go to hospital. It will not be safe to return to previous levels of activity due to the physical space constraints referred to above. The urgent care system will therefore need to consider other ways of managing the overall demand for care and spreading work more evenly across the day.

The approach used in Denmark, Norway and the Netherlands of emergency departments only being accessible by ambulance or GP/helpline referral seems to be effective. It results in lower and more appropriate overall use and would potentially provide a safe mechanism for lowering and spreading demand for services more evenly. It would also build on the experience that citizens have gained during the Covid-19 outbreak of using the phone as the first point of contact. However, it should also be noted that this would require clinical input to 111 to be increased, with special arrangements for people without homes or fixed addresses and those who have difficulty using phones.

There are also very significant opportunities to continue the shift of outpatient appointments to digital, phone and other non-face-to-face modes of working that could release time and physical space within hospitals. Given the
outbreak, this approach would also offer opportunities to redeploy clinical staff who cannot see patients due to their own vulnerability. Our conversations with hospital leaders indicate that a number of trusts are considering even more radical redesigns, including replacing outpatient referral processes with advice and guidance, specialists working more closely with primary care, and ‘virtual’ multidisciplinary teams for shielded patients and people with multiple needs.

As these possible new approaches show, some of the productivity and capacity issues presented by Covid-19 can also be understood as opportunities – for example, replacing referral for outpatients with improved advice and guidance services, and models where consultants provide case reviews, support for patient management and other input to primary care.

**Hospital configuration**

From our discussions with hospital leaders, it seems a number of strategies for responding to the issues thrown up by Covid-19 are being considered.

One option is to create Covid-free hospitals where all patients are confirmed not to be infected before having treatment – this has been done in China and is being considered elsewhere. These hospitals would focus on planned operations. However, this arrangement is not always an option – particularly in more rural regions, geographical distance and the configuration of hospitals makes it difficult. Another approach is to create ‘streaming’ within hospitals to separate the movement of patients and staff. This could include the designation of infection-free areas, using separate buildings, or creating different routes through the hospital. The continued use of the independent sector is also likely to be a key part of any response, although not all of these hospitals have the capability to perform major surgery.

The new **hospital building programme** announced by the government last year will need to incorporate these important lessons into the design of any new hospitals. Furthermore, some existing hospitals will need to be reconfigured, as they may be physically unable to provide a safe environment for patients, or services may need to be moved to create safe treatment options.
How different areas of treatment may be affected

Additional intensive care capacity will need to be retained in many hospitals while Covid-19 patients are still presenting. It would also need to be retained given the expectation of subsequent waves of the virus. Some of the leaders we interviewed believed there were benefits to patient outcomes from centralising specialist expertise for Covid-critical care. Creating sub-regional capacity of negative pressure intensive care – facilities which can isolate a patient suspected of having an infectious disease – is one solution being adopted, although this would require increased patient movement that uses ambulance capacity and medical or nursing staff for escort duties. Another idea is to centralise all major surgery into a ‘clean’ intensive care unit.

In London, consideration is being given to the centralisation of other services, such as paediatrics, to provide separate flows though the hospital and a critical mass of staff to support this. The separation of elective and emergency activity on to different sites, where this is possible, is being considered as it reduces the risk of cross-contamination.

Crossing the hospital–community boundary

Discharging patients from hospital

It has long been known that hospitals have significant numbers of patients in beds who might be better cared for in other settings. During the recent crisis, there has been some success in expediting discharge for patients for whom this would be appropriate, although planning for discharge of patients to care homes should take account of learning from the first wave of infection.

The positives from this experience need to be retained, but in order for this to be possible, investment in community services and maintaining improved management of discharge will be necessary: some of these services were only able to function due to support from other community staff who will need to return to their normal duties. There may also need to be some changes to legislation to be able to ‘lock in’ changes in this area. However, there is a likelihood of increased sensitivities among people’s families towards the idea of discharging a loved one to a care home following the difficulties of recent months.
An idea that is already in use being considered for expansion is ‘virtual wards’. In virtual wards, patients are monitored at home, with their own devices or technology provided by the hospital, and remain under the care of the consultant, thereby ensuring that GPs are not overburdened. Patients may receive actual or virtual visits from members of the ward team, which would include nurses, therapists and pharmacists. This allows capacity to be expanded more easily than opening acute beds. There is a good evidence base to support these models as safe and cost effective, particularly if the alternative is building additional hospital accommodation.

**Social care**

With local authority incomes reduced by the effects of the lockdown, the funding of social care is at risk. With this in mind, continuing to build on the new and positive ways of working together that have been adopted during the crisis to improve integration and coordination between health and social care is vital.

Delays to movement between hospital and other settings may arise from the need to test patients immediately prior to discharge. It will also be necessary to stabilise the adult social care sector, including increasing the amount of support from community services and GPs. Care homes, most of which were already in a poor financial condition, have lost income and will have increased costs in future. Any support would need to take into account their current financing arrangements.

Furthermore, the social care workforce will also need increased training, testing and stability of employment if they are to avoid becoming a vector of future infections. Without stable employment patterns, attempts to train care staff to conduct procedures without additional support will fail.

Substantial additional support and professional development is needed for care home managers who have felt very isolated, have had difficulty brokering the support they need and will need to be able to lead teams undertaking more complex and demanding procedures than before.
Community services, dentistry and general practice

There are analogous challenges for primary care and community services, all of which will require a lot of thought. Many of the procedures involved in community services require the patient to be present at the very least, and in many cases involve direct physical contact. Opportunities for more virtual treatment and consultation do exist, but they are more limited than in some other areas.

There will also be additional demand as a result of the last few months. It is likely that more support will need to be given to care homes by community services, and a large section of the population who have to be shielded will now require care at home where previously they would have been able to visit health and care services.

There are also potential logistical issues with the way community clinics have previously been run. For example:

- Many patients are treated in groups for musculoskeletal conditions and for pulmonary and cardiac rehabilitation – this will probably no longer be possible. However, building in video or other capability for supervision into existing chronic disease management apps would help with this.

- The logistics of organising multiple flows of patients in confined spaces will be difficult to organise for services such as ‘one-stop’ clinics for conditions like diabetes, whereby patients can have podiatry, retinal examination and other checks all in the same place. One urban trust was considering using a driver to take teams to patients to overcome this, but this would require local authority agreement to allow free parking.

- Mother and baby clinics tend to be embedded into other services and often operate on a drop-in basis. Alternatives to this will need to be found, but some of the value from interaction with other services and users may be lost in the process.

- Sexual health clinics also have high levels of walk-in users. In common with other facilities, waiting areas for these services are not very conducive to distancing. There is scope to run some services virtually, but this only works for some aspects of the service as it tends to operate on a walk-in
basis. Not only is there a potential loss in the range of support offered, but patients may be put off seeking treatment if walk-in services are restricted.

**Nursing care**

For domiciliary nursing care, there are some significant challenges. In the absence of widespread and frequent testing, all domiciliary community care will need to work on the basis that patients and staff are potentially infectious. This will require additional PPE that would need to be put on in the patient’s home. Prepacked kits can reduce the time required for this, but one organisation reported that visit times had still increased from 22 minutes to half an hour. Some issues with patients and logistical problems has led to an increase in the need for phoning ahead and attending in pairs for home visits. Applying existing technology to routing and scheduling could assist with this.

Despite these issues, the Covid-19 crisis has led to patients and staff agreeing to less frequent visits and more care being done by the patients themselves or their carers. For example, one trust has taught patients how to flush out chemotherapy lines. A number of opportunities for reviewing practices, such as reducing injection frequencies by changes in prescription, changing the threshold for referrals, and supervising self-care by video are being investigated. Furthermore, in one hospital remote support for care homes and vulnerable patients is being extended by using technology supported by increased access to a multidisciplinary team.

**Dentistry**

As dentists return to work, they will be required to use high levels of PPE and to clean rooms and equipment as well as potentially needing to allow for air changes between patients. This will have major implications for dental practice in general. The effects will not only be on productivity, but will directly affect dentists’ income and costs. This will be a particular problem in the private sector, and even has the potential to make NHS dentistry unviable in its current form.

**General practice**

The implications are also significant for general practice, and the time required for safe consultations, the need for PPE and other changes detailed above will also affect GPs’ ability to return to pre-pandemic work levels.
The shift to phone-based consultations and telephone triage is likely to be maintained and will help offset some of this – although the supposed gains in GPs’ productivity from this should be treated cautiously. It should also be noted that these altered ways of working change the nature of the work, including increasing the cognitive load on GPs. There is some indication that remote consultations may result in more tests of any kind being ordered and more antibiotics being prescribed, as the doctor’s approach to risk needs to err more on the side of caution.

The ‘hot hub’ model of specific practices being designated for use by patients within the region with suspected Covid-19 appears to have worked well, and may need to be maintained in many areas. Small GP practices operating in houses or other accommodation finding it difficult to adapt to new ways of operating may have to change their model and may not be viable in this form in future. Local primary care rooted in communities is important for dealing with health and other problems arising from social pressures and, where appropriate, de-medicalising them. It is important that this is not lost in a rush to centralise and consolidate services.

Furthermore, it is likely that primary care will have to deal with a large amount of pent-up demand for services during a period where hospitals will be facing a similar situation. GPs have already been taking on a significant level of risk (by managing patients themselves rather than referring them) which will not be sustainable for long. Practices and hospital consultants will have to spend a lot of time, in the short term at least, reviewing and triaging this work and developing a very different model from the traditional referral and outpatient pathway.

All of these potential changes make the role of primary care networks very important as a facilitator of a number of important changes – allowing the distribution of different types of work between practices and acting as the basis for changing the model for integration with secondary care services.

The health care workforce

It is worth noting that the NHS went into the Covid-19 crisis with a very large number of vacancies and intractable shortages of key staff, all of which necessitated high levels of international recruitment.
Some staff have returned from retirement to assist with the pandemic response, but it is not clear whether they will want to stay once ‘usual’ work returns. There is some concern among health leaders we spoke to that, given the recent experience of some staff, there will be increased sickness and that people close to retirement or considering leaving will bring their decision forward. As noted above, there is also a question over which staff need to be protected. Given emerging data on mortality for black, Asian and minority ethnic staff, this is of particular concern in some organisations where these ethnic groups represent a high proportion of frontline staff.

How far the NHS will now be able to rely on international recruitment is not clear. Restrictions on international travel, quarantine, the general anxiety of people about being away from their families, and the international market becoming increasingly competitive will all make this more difficult.

**New approaches to health services**

Finally, there may be a need for new, specific post-Covid services to be developed – for example, multi-system rehabilitation, which is not currently available, including pulmonary follow-up for patients with lung fibrosis and psychological interventions following intensive care. It is likely that all Covid-19 patients who have been in hospital will need some support. New services such as these will compete for resources alongside the existing ones and add to the complexity of the organisational and productivity issues discussed above.
Policy analysis

The future is uncertain and, as noted, the emergence of a fast, cheap and accurate point of care test would remove some, but not all of the difficulties outlined in this paper. There may also be some easing of restrictions in some parts of the service if the virus is largely suppressed in the community – although due to both higher actual and perceived risks in health care settings, social distancing will still be a feature of health care until a vaccine is readily available.

For now and the foreseeable future, the implications of living with the virus are profound. It is necessary to be cautious about assumptions about future levels of activity and performance and the costs of achieving them. Even if some of the factors inhibiting a return to full productivity can be overcome, the need to retain surge capacity, the need to care for shielded and quarantined patients, and the cost of additional tests, cleaning and other new facts of NHS life will add to costs and reduce overall productivity.

Waiting times are already growing. Even allowing for reductions in referrals, continued use of the independent sector, some increased reluctance of patients to come to hospital and less follow-up, the current waiting list will grow rapidly and could even double in the next six months. Clinicians will need to take some difficult decisions about priorities, access to treatment and approaches to escalation. The whole experience may pose some very important questions about the necessary thresholds for treatment, which conditions are sensitive to changes in patient preferences, and, as waiting lists begin to be combined, the effect of differences in clinical decision-making about who requires surgery.

The mutual aid and collaboration across organisations that has been a feature of the last few months will continue to be important and will need to be maintained. For hospital services it will be important to redistribute some services between sites that will require the STP/ICS to be able to bring different organisations together and deal with the organisational and financial implications. A more rapid move to the creation of integrated care providers at local level and better and clearer decision-making machinery at STP/ICS level is necessary, although questions remain over their relationship with regional bodies that still need thinking through.

In all scenarios, the previous models of commissioning, procurement, payment
and loose coordination between independent sovereign organisations do not look fit for purpose. More thought is required before decisions on this are taken, and given all the other challenges, a major structural reorganisation will not be helpful. However, in the interim, there is a need to work differently in terms of intra-organisational behaviours and the way the system operates.

Care homes will need particular support and appear to be being brought more rapidly into the local health and care system. Community services will also have a crucial role to play in supporting primary care and ensuring continuing rapid discharge of hospital patients. Leaders we spoke to referred to the value of collective working in primary care and noted that the worth of GP federations and primary care networks had been demonstrated.

Looking across the breadth of issues discussed here, it is important to note that some of the changes that would require hospital and service reconfiguration will have significant knock-on effects on other services. Some elements would require public consultation and may be contentious.

While the public have been understanding of the major changes that have been necessary so far (for example, one small trust has closed its maternity unit temporarily), they may not be so content to see changes become permanent. The obligation to consult has been suspended during the period of the emergency but, at some point, contentious issues will need to be discussed with a public that may be suspicious of changes appearing to be smuggled in under the banner of Covid-19. In order to guard against this, developing better processes to promote involvement and rigorously test the options without creating unnecessary delays would be prudent.

Many of these issues also have significant implications for the hospital development programme that was announced before the pandemic. It will be vitally important to avoid some of the errors of previous programmes and include more generous allowances for room and circulation space, more single rooms, more reconfigurable space, allowing for more segregation of flows, and so on. All of these additions will inevitably increase costs, but equally should help to avoid some of the errors of the past.
Conclusion

If there is a drop in capacity at the more severe end of that predicted by the health leaders we spoke to, it may require many current constitutional standards and commitments to be revised. For example, even before the pandemic, it was going to take at least two years to return to agreed levels for the 18-week target for planned treatment. Without long-term use of private sector capacity, this may remain out of reach.

Without a vaccine or a reliable test, the issues outlined here may mean that the UK will be operating a health system with the capacity of a middle-income country – but with the expectations, regulatory standards, inspection regimes and governance of a high-income one.

Some features, such as inspections and revalidation, may need to be put on hold for a while while the system gets back on its feet. But even with these adjustments, there is no escaping the reality that the dilemmas faced by the health and social care system will produce tensions that will be extremely difficult to manage.
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