



Medtronic

Integrated Health SolutionsSM

Recovery after COVID-19:

The five keys to maximizing hospital capacity

As your hospital begins transitioning to normal operations, we have put together a portfolio of solutions to alleviate the capacity gap. In this paper, we describe our comprehensive fast-track solution, titled Capacity Recovery Center, to help you safely accelerate your procedural restart while making the best use of your available capacity. We deliver a six-week project, designed to immediately relaunch your activities and equip you with a roadmap and the tools to optimize capacity for the long term.

Recovery post COVID-19 means maximizing capacity and resources

Across EMEA, the COVID-19 pandemic has upended hospital activities as they were forced to pause or cancel elective procedures and reallocate resources to treat virus patients. In fact, a University of Birmingham study's statistical model estimates that, globally, more than 28 million elective surgeries will be or have been postponed over a 12-week period. As hospitals gradually reopen their doors for elective procedures, they will likely face a backlog of patients, of which the size is often unknown, and the priorities are unclear. With a static number of ORs and cath labs, this backlog will be difficult and time-consuming to manage without a strategic plan aimed at maximizing available capacity.

Why "let's pick up where we left off before the pandemic" will not work

In working with client hospitals across EMEA, at varying stages of reopening for elective procedures, we have identified constraints that can make resuming operations difficult.



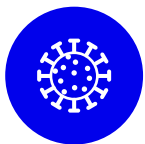
Time will be of the essence

The backlog of procedures will grow exponentially the longer a hospital waits to reopen. Making up a three-month pause in elective procedures over the remaining nine months of the year creates 33 per cent more workload on top of the normal demand over that period. You will need to find ways to maximize your existing capacity.



Hospitals will need to reserve space

It is likely hospitals will need to maintain a buffer to allow for recurring waves of COVID-19. This means hospitals may be able to open only 70-80 percent of their infrastructure to normal operations.



New routines will take time and are subject to change

Hospitals will need to adapt new routines for infection control, such as testing patients for infection, maintaining social distancing in waiting rooms and operating rooms, adding additional hygiene measures. The list seems endless and hospitals need to be prepared to pivot, as recommendations and guidelines are continually updated.



First come, first serve will not be an option

Hospitals will need to have rules in place about who gets treated first. In some cases, governments may impose these rules, and in others, it is a matter of medical prioritization, where hospitals must ask, "Is this case at significant risk of worsening if a procedure is postponed further?"



Hospitals may be short-staffed

Medical staff, the most precious resource for hospitals, was scarce even before the pandemic. With COVID-19, some staff will continue to need to quarantine if they are exposed to the virus, others, due to a personal risk profile, will not be able to work in high-risk areas. Staff who have been through an intense period of working in crisis mode may not be able to handle the extra burden.

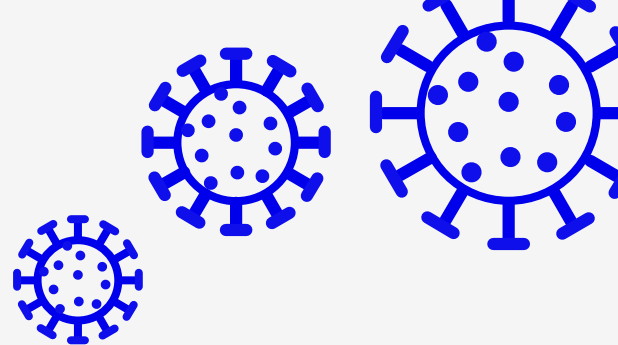


Other resources may continue to be scarce

The availability of materials, drugs, devices, and personal protective and other equipment may be constrained. Hospitals must watch their supply chain closely, so they do not run the risk of having to cancel a procedure due to supply issues. With all these factors at play, planning, scheduling, and coordination needs to be completely in sync across the hospital for a successful resumption of post-COVID-19 operations. Hospitals must take the six aforementioned factors into consideration so they can be confident in not only their capacity, but also their ability to provide a high level of care and follow-up for every patient who is scheduled for a procedure.

The COVID-19 pandemic crisis is – at least in the globalized, modern world we live in – unprecedented. There is no similar event of a similar magnitude we can compare it to in healthcare. Therefore, recovering healthcare operations will require a different set of skills, and with patients' health at stake, this is not a time for trial and error.

The good news is that hospitals around the globe are already at different phases of this challenge and have started to establish best practices and ways to operate in this post-COVID-19 environment. For hospitals who are just entering the opening-up phase, the ability to tap into the experience of hospitals who are further along the path, as well as that of efficiency experts, means they will not have to endure the painful learning curve of those that have gone before them.



Another bit of good news is that, while it is not quite the same as a pandemic, we can learn a lot about recovery after events such as natural disasters. Once a disaster has passed the acute phase, professional recovery teams come in, and in most cases, follow a similar sequence that has proven most effective. We have adapted this sequence for hospitals to recover from the crisis with greater haste, and it includes these five keys:

1

Setting up a functionable recovery center and structure

This step seems to be counter-intuitive if you are trying to do things quickly, but by having a structure in place, you actually can avoid additional work and chaos, even as the situation continues to evolve. The last thing a hospital needs in the recovery phase are redundancies, turf wars, lack of communication, and unclear plans. An effective recovery program requires a clear plan, structure, and defined responsibilities. By following an industry-standard program approach for recovery, it takes the burden off doctors and nurses, who will need to focus their full energy and attention to providing excellent care.

2

Having one overview and a single source of truth

Flying blind is not an option when trying to bring all constraints in line and balance hospital resource supply and demand. And with information coming in from various places, it can become confusing. To make effective decisions, hospitals need to aggregate data in one place, guided by clear rules. Information gathering needs to be structured and standardized, so data can be integrated. It is helpful to have a tool that will track the backlog of patient demand and key parameters for planning such as capacity, prioritization, and an understanding of previous capacity performance. This will enable better optimization and better management of both patient and staff expectations.

3

Putting in place a scheduling blueprint that accounts for capacity, constraints, and waitlists

Planning and scheduling hospital procedures has always been complex, as there are many inputs to consider, from room, equipment, and staff availability to providing the right buffers for emergency procedures. The COVID-19 situation adds even more constraints, such as prioritizing the waiting list according to medical urgency and official guidelines, the availability of beds (complicated by infection control measures, isolation of possible COVID-19 cases, etc.), supply chain disruptions of device and medication availability, just to name a few.

These constraints need to be captured and operationalized, e.g., by filtering and categorizing patient cases, providing a case-by-case rating tool for clinicians for referral, and translating it into a tactical plan, often referred to as the "scheduling blueprint." This blueprint is key to optimizing a hospital's capacity. It acts as an integrating layer between constraints, capacity, and waiting lists, translating it all into a "calendar template" that recommends which type of procedures will need to be scheduled in which room using which teams. This may seem complex, but there are systems that are quick-to-install, use anonymized data to find the optimal scheme, and can be updated whenever necessary.



Forming a dedicated implementation team

Experience shows that a multidisciplinary, diverse team to implement the recovery actions is most effective. This will allow clinicians and nursing staff to focus on: ensuring excellent care, even under these extraordinary circumstances.

It is also a best practice to mandate that the recovery team report directly to hospital leadership to avoid conflicts of interest. It is not unusual for service lines to want to prioritize their respective patient waiting lists and to protect their own staff shift plans. Ideally, the implementation team will be supported by external, objective specialists, who temporarily steps in to help the hospital meet its recovery goals.



Transitioning to the “new normal” and using the crisis as a catalyst for positive change

It has been said one should never “let a good crisis go to waste,” and it is important to keep the momentum of change going even as COVID-19 subsides. Many hospital leaders have remarked that the COVID-19 crisis has forced huge changes over a very short time that, heretofore, were unimaginable. Changes such as cross-departmental team collaboration, digitization that enables contactless patient preparation, shifting procedures to an outpatient setting, or implementing better pathways. This has emboldened hospitals who now see an opportunity to institute more improvements were previously considered impossible.

IHS Capacity Recovery Center brings the five keys together in six weeks

We work across the region, exchanging knowledge and expertise with 200 of our client healthcare centers who are going through the same challenge. This gives you access to real-time best practices, learnings, and tools to speed your hospital's recovery.

The IHS Capacity Recovery Center takes the five key actions outlined above and puts them together into an integrated solution for your hospital's success. The program features:

- A centralized recovery center or “situation room” that serves as the nerve center where information is collected and aggregated to inform leader's decisions. This is the heart of the program, where planning, monitoring, and communication happens to ensure effective execution. It is supported with proven IT tools that reduce administrative burden while ensuring maximum program efficiency
- A single source of truth for analysis of upcoming demand and available room, staffing, and supply resources as well as data collection and tools that provide intelligent case prioritization for planning and scheduling
- An implementation team, along with tools and protocols that optimize scheduling
- Access to knowledge and best practices aggregated from the latest recommendations of official sources and subject-matter experts, along with tools, templates, and additional best practices developed in our international network of hospitals. Plus, you get continuous access to a large team of project experts involved in similar recovery projects, so we can help you quickly find solutions for your specific challenges
- Support with adjusting hospital strategy and transition planning for the new normal way of working

Through the IHS Capacity Recovery Center program, we can help you



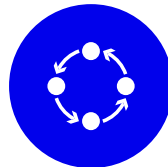
**Aggregate
the lessons learned**



**Make the best use
of your capacity**



**Recover your activity
more quickly**



**Develop a strategic plan for
the coming 12-24 months**

Embrace the new normal, thus putting your hospital on a stronger footing than before covid-19

How it works

We deliver the solution that accelerates and optimizes recovery over six weeks. This includes two phases:



The first four weeks includes creating visibility into available data, outlining an intervention coordination plan, and implementing scheduling.



The final two weeks consist of developing a plan and roadmap for your hospital's mid-long-term recovery and transition to the new normal.

Week 1: Situation overview

Set-up Program Management Office (PMO) and create situation overview

- Install out-of-the-box recovery program structure and team
- Collect data on existing procedure backlog across units
- Retrieve information on capacity (beds, rooms, staff availability etc.)
- Create recovery situation dashboard

Week 2, 3 & 4: Planning and implementation

Develop recovery plan and coordination structure:

- Determine case prioritisation rules
- Define intervention plan blueprint
- Establish scheduling team guidelines and structure

Establish and implement recovery scheduling process:

- Set up criteria for scheduling
- Enact standards and checklists, templates
- Implement scheduling process
- Monitor daily stakeholder feedback on scheduling status

Week 5 & 6: New normal planning

Creates a plan for transitioning to the new normal

- Define and outline key levers and initiatives to optimise care delivery model and operations
- Develop implementation roadmap and high-level case for change

Transfer scheduling coordination to hospital staff and provide ongoing support and coaching if required

Adapt support and training to reduce COVID-19 infection risk.
Create change communication plan for hospital leadership

Examples of our Capacity Recovery Center in action

Case example 1: Maintaining CathLab volume during the crisis to reduce wait lists

We worked with cardiology department management at a large teaching hospital, helping them develop a single source of truth during the crisis. Our work enabled them to maintain cath lab volumes at 80 per cent during the COVID-19 crisis period and thereby avoid long waitlists for patients.

To do this, we first created visibility into the impact of COVID-19 on their backlog of care, including referrals, outpatient appointments, function tests, procedures, and inpatient stays. Then we worked out different scenarios, assessing the impact of each and its corresponding effect on their timeline for complete recovery.

Next, we identified the bottlenecks that occurred during the height of the pandemic and during recovery and how to remove them. To give the hospital insight into their waiting lists and waiting time as well as productivity, we created a dashboard that quickly informed their weekly management team meetings and paved the way for effective tactical planning, embedded in a clear structure and governance.

To ensure these insights are translated into the right actions for optimization of the use of the existing capacity, we installed a crisis governance mechanism for short-term steering. The insights also led to adaption of the tactical planning template for the schedule, the so-called 'blueprint'.

"The beauty of the concept is that the recommendations, supported by data and calculations, can be monitored by our own team. We are really making progress scaling up regular care!"

Lead cardiologist, large teaching hospital

"This project is the basis for our continuity planning."

Cardiology Department manager,
large teaching hospital



Case example 2: Helping clients capitalise on the momentum of the crisis

We are actively helping our clients to plan for the transition to a new normal, using the crisis as a catalyst. For example, for one of our clients it turned out that moving non-COVID-19 patients to an outpatient clinic appeared to be a key factor for their successful recovery. The client had already been considering remote opportunities to improve the quality of care and free up capacity, and the crisis gave them the impetus to move ahead with plans they had been putting off.

“Thanks to the insights from the analyses we made active choices on how to scale up our outpatient care.”

Cardiology Department manager,
large teaching hospital

Post-crisis, the client wants to further move in this direction and optimize their remote operations. To assist them, we began by creating an overview and gathering data on the remaining backlog of patients. From there, we are identifying opportunities to provide other types of outpatient care to this waitlist. This includes revising protocols and follow-up activities, exploring remote care, e-consultation, use of apps, and enabling further in-region collaboration across a network of primary care and other hospitals.

Our initial estimates are finding that up to 80 per cent of this client’s outpatient care could be organized remotely.

Based on data and insights gathered during recovery, we worked with our clients to help them transform their care models. The journey through the crisis have uncovered opportunities that have implications for their hospital strategies and operating models and include options such as shifting to digital care and telemedicine, moving additional procedures to an outpatient setting, and forming highly effective cross-discipline clinical centers or programs for operational excellence. Once a direction has been identified, we develop and provide them with a high-level roadmap that will pave the way for implementation.



About Medtronic IHS

Integrated Health SolutionsSM builds on Medtronic's unique combination of capital resources, process optimization expertise and therapy knowledge. In cooperation with medical institutions, IHS develops innovative services and solutions to improve efficiency, reduce costs, facilitate patients' access to different types of treatment, and improve outcomes.

To learn more about how the IHS Capacity Recovery Center can help your hospital quickly restart procedures and maximize capacity while preparing for a new normal - **visit our [website](#), reach out to your Medtronic contact or email us at: integratedhealthsolutions@medtronic.com**

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