

Many of the changes in healthcare adopted during the COVID-19 crisis will result in more productive healthcare services and better patient outcomes – something much needed in many health systems globally. Here is what the IHF ‘Beyond COVID-19’ Task Force identified as some potential areas for transformation to meet key supply, logistics and infrastructure challenges faced by hospitals during the coronavirus pandemic.

# SUPPLY, LOGISTICS, AND INFRASTRUCTURE



## SUPPLY

### Procurement

- **Innovation in procurement**  
Purchasing needs to be done not only with urgency, but also under high uncertainty and within a rapidly changing landscape. Hospitals could move towards direct procurement – overcoming bureaucracy and working directly with sourcing suppliers to find innovative solutions to purchasing needs.
- **Contract management in a crisis**  
Hospitals will need to work in partnership with suppliers to plan an exit from previously agreed contracts and transition to a new, sustainable post-crisis operating model. Hospitals should take a pragmatic risk-based approach, keeping a record of commercial or financial changes or variations to contracts to maintain an audit trail for future purposes.
- **‘Plan B’: looking beyond preferred suppliers**  
As traditional supply chains have been disrupted, hospitals must consider ‘out of the box’ providers and diversify their suppliers. This is particularly important for items - where there is a limited market of suppliers.

### Stock

- **Availability and allocation**  
Regular inventories of warehouses should be conducted to ensure sufficient buffer stocks are in place for future unexpected healthcare crises.  
Hospitals will need to ensure that this stock remains ‘in date’ over time and meets correct quality standards/regulations.
- **Managing devices and equipment**  
To ensure the rational use of medical devices and equipment (e.g. PPE) needed during a healthcare crisis, hospitals can create a database of consumables and equipment manufacturers critical in a pandemic to better track and allocate limited resources across different departments and sites.



## LOGISTICS

### Keeping a ‘clean’ workforce

Hospitals need to manage how ‘clean’ staff can enter a building safely, without exposure to other staff who carry a risk of virus transmission. Examples of managing this issue include:

- Staggering the times of staff arriving and leaving hospital sites to enable the decontamination of shared spaces, such as changing rooms.
- Providing areas where staff can change into uniforms on arrival at work and safely dispose of leave ‘contaminated’ uniform items.

### Healthcare waste management

Internal and external waste management is dependent on the effective implementation of logistics for the collection of PPE materials and clinical waste.

Hospitals will need to consider ways for staff to safely dispose of contaminated materials. Staff responsible for the disposal of clinical waste into their hospital’s waste stream should be trained in appropriate disposal techniques (i.e. correctly sealing bags of used PPE) to reduce the risk of virus transmission and potential infection.

### Global product standards

Implementing global product standards within a healthcare organisation will:

- Support traceability.
- Reduce manual stock work.
- Ensure accurate stock keeping and automated recording.
- Facilitate procurement.
- Reduce risk of substandard supplies.
- Realise cost-savings in the long-term.



## INFRASTRUCTURE

### Hospital architecture in a COVID-19 world

If a hospital is part of a multi-site network (i.e. comprises a series of different buildings across a single campus), then it must consider how to restructure its environment and manage people and product flows to prevent the spread of virus across the entire estate.

Many hospitals have invested in buffer zones - car parks or sports fields close to their facilities – to screen patients, staff, and visitors ahead of entry.

### Inside the hospital

- **Hospital architecture in a COVID-19 World**  
Future hospital building programmes should work to eliminate direct contact with communal services to create a ‘hands-free’ environment – for example, controlling blinds, lifts, lighting via a mobile phone.
- **Managing flows of people**  
To minimise the risk of infection, many hospitals have redesigned flows of people through the physical environment. For example, colourful, physical signage encourages staff and patients to walk clockwise around the hospital, creating a one-way flow of people to minimise virus transmission.
- **Conversion of existing spaces**  
To quickly respond to unexpected healthcare situations, hospitals should develop a ‘compartmentalisation plan: in which ‘safe’ areas can be readily converted during times of crisis. For example, ‘patient recovery rooms’ created by permanent ceiling mounted tracks that accommodate temporary fabric partitions or curtains.
- **Infection prevention**  
To reduce the risk of transmission in the hospital, emergency departments can be brought ‘outside’ with temporary structures - such as tents or pavilions - readily employed to screen suspected COVID-19 patients before entry to the hospital.

The frequency of cleaning the care environment in designated COVID-19 areas should be increased, for example single rooms, cohort areas and clinical rooms can be decontaminated after each patient contact.