HEALTH SYSTEMS' RESPONSE TO THE PANDEMIC:
A GROUNDED FACULTY-REFLECTION, ENGAGED WITH HEALTH SYSTEMS

HARC – The COVID-19 pandemic has provided health systems the opportunity to develop resiliency, with several innovative approaches starting during the pandemic. Health systems across the United States were not wholly prepared to face the COVID-19 pandemic, when on January 21, 2020, the United States announced its first case. The WHO declared a global health emergency ten days later and escalated it to a pandemic by March 2020.

At the University of Colorado Denver, classes moved to remote or online by mid-March. Stay-at-home orders were implemented. The world around us paused as panic, isolation, and gloominess seeped into everyday life.

HARC-affiliated faculty and researchers took this time to reflect on "what can we possibly do?" **Dr. Rulon Stacey**, Director of Health Programs at the University of Colorado Business School, provided a follow-up perspective. One issue that struck us was the responses of health systems to the pandemic. In speaking with several CEOs of health systems, it became apparent to Dr. Stacey that hospitals were losing large numbers of potential patients (e.g., elective-surgery patients) while diverting resources to treat COVID-19 patients. Emergency room (ER) volumes were down. The crisis threatened health systems' financial viability, plausibly leading to their inability to provide care. Upon reflection, health systems did not fail but responded to the pandemic in different ways and are continuing to do so.

The Call to Action by the International Hospital Federation

HARC's continued efforts to connect with health systems entered an international arena when the **International Hospital Federation**[1] invited three faculty members to contribute experiences and lessons learned from the health systems during the pandemic. IHF invited **Dr. Wayne Cascio, Dr. Blair Gifford, and Dr. Jiban Khuntia** to be part of three international taskforces to address pressing issues facing hospitals worldwide. The purpose of the taskforces was to disseminate best practices to support hospitals in this time of crisis.

The taskforces convened multiple times from March to November 2020 to share and discuss experiences, challenges, insights, and solutions. Members reported and produced a set of cases on practices implemented during the

> **IHF 'Beyond COVID-19' Task Force**[1]
> **Objective**
> **Supporting hospitals in a time of crisis:** The COVID-19 pandemic has accelerated innovation within healthcare at an unprecedented pace, towards more effective and agile models of care – a transformation much needed in many healthcare systems globally. To support its members to realize the benefits of these changes, the IHF has established this task force.
> **Purpose**
> The Task Force will produce a report and a series of case studies to encourage hospitals to adopt practices realized during the COVID-19 pandemic, which have beneficially transformed healthcare services, and so should be sustained in the future. This report will be published by the IHF later this year, focusing on three thematic areas: (1) Healthcare Delivery and Access, (2) Supply, Logistics, and Infrastructure, and (3) People.

COVID-19 pandemic that have beneficially transformed healthcare services and should be sustained in the future. The efforts culminated in a virtual forum for hospital and healthcare leaders, **Learning from COVID-19, Transforming Health Services**[2]. The forum was an opportunity to debrief and discuss learnings from the crisis, address critical questions on strategies for the new normal, and explore how health services are transforming for the future. The event was a success, attracting participants from 56 countries. Drs. Gifford, Cascio, and Khuntia present several insights in this report derived from their experiences with the process.

Healthcare Delivery and Access

The healthcare delivery-and-access taskforce identified several potential areas to meet essential challenges in this area faced by hospitals during the coronavirus pandemic[3]. Hospitals postponed non-urgent care (particularly surgeries with extended

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[1] https://www.ihf-fih.org
[2] https://www.ihf-fih.org/covid-19-virtual-forum/
[3] https://www.ihf-fih.org/wordpress/wp-content/uploads/2020/08/IHF-Healthcare-Delivery-and-Access-Infographic.pdf

recovery times) and deployed staff to manage the overwhelming influx of COVID-19 cases better during the pandemic. This group's work led to a virtual forum session.

The virtual forum started with an interactive poll of participants. Forty-seven percent said that the most critical issue for their hospital was maintaining essential services, 28% said that it provided access for vulnerable populations, 13% said it was managing surge capacity in the hospital, and 10% said adopting new care models was the primary issue.

Several examples of innovations that emerged as a result of COVID-19 were presented during the session. In the first case, a hospital in Saudi Arabia described how it opened a drive-through pharmacy to maintain social distancing and convenience for patients since they no longer had to enter the hospital. The idea for a drive-through pharmacy had been floated before COVID-19 but was met with resistance. The pandemic opened up possibilities for new ways to provide essential services. A key to the pharmacy's success was having a call-center schedule for patient drive-ups and other administrative needs. This was necessary to stop cars from parking at the hospital. With the help of efficiency experts, the hospital improved drive-by processing by two thirds over time.

> **Lessons from Healthcare Delivery and Access Taskforce**
> - Handling numerous new complexities from similar hospitals in the U.S. (e.g., Minnesota Children's' Hospital) requires an open, non-judgmental mindset.
> - The role of health professionals and leaders has emerged beyond the clinical, to be 'wartime generals in the community'. This was crucial for nurses for a "community" of the health professionals in hospitals (Spain), as an example.
> - Governments need to refocus on public health. Public health contributes to population health and maintaining the nation's economy. This is increasingly obvious, with variations across economies, but reassuring to see the examples in some emerging and developing countries, such as Pakistan

A second case was the development of a self-triage application for a hospital in Finland. An app helped people determine whether they had symptoms, whether they should quarantine, and whether they were at high risk, thus needing hospitalization. The app provided confidential test results within 24 hours. If the results were positive, health professionals would contact the patient. The hospital found that 70% of patients were willing and able to use the app.

The panel consisted of hospital administration experts (Minnesota – USA, Spain, and Pakistan). The CEO of a Children's hospital in Minnesota said the hospital's primary challenges during COVID-19 included: (1) patient safety, (2) maintenance of essential services, and (3) the well-being of patients. For example, health professionals in the hospital used apps to check on a patient's family life to see if there were any problems such as abuse, neglect, mental health issues, and food insecurity.

A Community Health expert from a University hospital in Pakistan said that COVID-19 had brought essential changes, including: (1) the need for the Government to provide additional funding for the poorly funded public health system in Pakistan, and (2) the need for multi-sectoral collaboration between business, education and health institutions to manage the COVID-19 pandemic. A vital issue for the hospital was rural hospitals in their health system. The underfunded District and sub-District hospitals needed help from the large, urban teaching hospital, for example, on how to use ventilators correctly. A second issue was providing for neglected areas of care (e.g., mental health, disabilities). The hospital has worked well with private organizations (NGOs) to manage this.

The Health Professionals Association in Spain had numerous issues to deal with, including 1) preserve essential hospital services, 2) develop telemedicine usage and capabilities, 3) initiate multi-disciplinary care, and 4) have hospitals work directly with nursing homes.

The Children's specialty hospital found telemedicine to be quite effective at providing physical, speech, and occupational therapy over the internet. That is, caregivers and families responded positively and have been entirely engaged in online therapy sessions.

In Pakistan, a teaching hospital developed an app to identify people who should not come to the hospital. Since secondary and tertiary hospitals are suspect in Pakistan, people often surge to large teaching hospitals in urban areas. The hospital found that

its app was handy and used by all people, even the poorest people. That is, most people have a cell phone. Thus, electronic surveillance of COVID-19 cases has been quite successful.

At the end of the forum, each panelist was asked for one comment about the human side of care at their respective locations. The Spanish panelist stated that Spain hospitals in Spain have had difficulty supporting patients and staff for non-essential care. The Pakistani panelist reported that his hospital's communications determinant has been key to their successes. For example, the department has continually sent out text messages to reassure the community that the hospital is a safe environment. The American panelist reported that Minnesota did the right thing by relaxing regulations that had not allowed telemedicine to occur across state boundaries. Also, she stated that the hospital's leaders have had to learn how to manage hospital staff burn-outs.

Reflections on Supply, Logistics, and Infrastructure (SLI)

Supply chains, logistics, and infrastructure (SLI) are the lifeline of healthcare. The COVID-19 pandemic disrupted SLI significantly across the world. Existing infrastructures of hospitals fell short in accommodating and treating COVID-19 patients while keeping other patients and staff safe by avoiding contamination and spread. Supply and logistics of essential medical supplies, equipment, food, and other vital necessities emerged to be a significant challenge. Drops in demand and surges by segments, along with supply shortages and reduced productivity, became problematic issues for health systems to handle. Subsequent consequences on the operations and financial viability of health systems were paramount.

Health systems tried their best to manage SLI challenges. Health systems relied on novel ways to accommodate the SLI-relevant disruptions. The pandemic has tested the ingenuity, resilience, and flexibility of supply chain leaders globally, as they have sought to maintain essential operations. The SLI group focused on discussing and reflecting on the failures, transformations, and relevant practices adopted during the COVID-19 pandemic that have beneficially transformed healthcare services[4]. Insights from the discussions were summarized during the virtual forum held during 4-5 November 2020[5].

The forum panelists also included Els van der Wilden-van Lier, Director - Healthcare Providers, GS1 Global Office at the Netherlands; Dr. Ricardo Mota, Hospital Manager, Coimbra Hospital and University Centre (CHUC), Portugal; and Prof. Nicoletta Setola, Associate Professor in Architectural Technology, Department of Architecture, University of Florence - TESIS Centre, Italy.

Similar to other forums, the SLI virtual forum session started with a survey of participants. The question was: "What was the biggest challenge in relation to COVID-19 that you have faced to date regarding supply, logistics, or infrastructure?" Fifty percent of the participants replied that "adapting the hospital environment to minimize coronavirus infection" was the challenge. Thirty-six percept participants noted "stock availability and allocation of critical items (such as PPE)" were challenging, with seven percent replied that "ensuring rational use of medications and pharmaceuticals" and an equal percentage chose "maintaining effective contract management and procurement processes" as major challenges. After the poll, the SLI Taskforce chair, Dr. Els van der Wilden reflected on the premise of COV ID-19's disruptions. She mentioned that acting as a radical disruptor to the 'normal' way of doing things, the coronavirus crisis has accelerated healthcare innovation at an unprecedented pace. Never before have hospitals and healthcare organizations been forced to change so radically in such a short period. For the most part, these changes have moved healthcare systems towards more effective and agile models of care – something much needed in many health systems globally.

Many of the common challenges were reflected in the experiences of pre-recorded videos of two professionals working in health systems and facing the ground realities : (1) Sandi Michel (Director of Supply Chain Strategy) for the Franciscan Missionaries of Our Lady Health System, Louisiana, USA, (2) Mónica Soler, Head of Healthcare, GS1 Spain. A common theme that emerged is that the importance of standards, pre-prepared logistical practices, and a bit of crisis preparedness

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[4] https://www.ihf-fih.org/wordpress/wp-content/uploads/2020/08/IHF-Supply-Logistics-and-Infrastructure-Infographic.pdf
[5] https://www.ihf-fih.org/covid-19-virtual-forum/

helped these health systems respond quickly and efficiently when the pandemic hit their systems[6]. The message conveyed by both executives could be summarized as: hospitals and healthcare service organizations needed to work closely with suppliers and partners. Dependency on core health product supplies as the COVID-19 pandemic impacts global health-product supply chains emerged as a critical challenge. It affected the shipping and logistics of essential materials, ingredients, and finished health products. The infrastructure and environment of hospitals needed to be reconfigured. Flexibility and agility in responding to the pandemic crisis became necessary, and some of these flexibility and agility aspects need to be carried forward to maintain efficient and effective health systems across the globe.

As part of the task force activity, Dr. Khuntia interviewed top executives from eight health systems and closely monitored their progress. A set of research briefs were produced and are available with HARC[7]. Reflecting on these experiences, Dr. Khuntia wrote a blog post with the task force chair, Els Van Der Wilden. The objective was to draw insights from hospitals facing the pandemic crisis and to help other hospitals face similar situations in the future. They noted that hospitals made three categories of decisions: (1) economizing decisions, which involve cost-cutting, complexity reduction, and performance-reducing decisions; (2) operational-continuity decisions to sustain or 'pause-plan-start' some procedures and activities, aligned to a crisis and as it unfolds; and, (3) new activities and process decisions that will lead to better solutions than existing ones.

Panelists Ricardo Mota and Nicoletta Setola highlighted the importance of infrastructural and architectural designs and the just-in-time flexibility to accommodate the surge of COVID-19 patients. These also provided avenues for frontline workers so that their safety can be assured. Innovations such as additional facilities, tents on the campuses, and using hallways for specific operations so that staff-patient exposures can be limited were key illustrations.

Along with these, there were additional takeaways: (1) Hospitals need to collaborate and coordinate with other partners to ensure a robust healthcare supply chain, (2) Build flexibility into practices to accommodate any unforeseen disruptions, aligning to the sudden surge in telehealth and virtual care necessitated by COVID-19 and subsequent reimbursement models, (3) Ensure a responsive supply chain, following global supply-chain standards and information infrastructure, while monitoring alternate approached.

> **Message from SLI Taskforce**
> - To improve resilience and to reduce risks from future disruptions to supply, logistics, and infrastructure, healthcare organizations can:
> - Map potential risks and vulnerabilities to create a transparent understanding of system weaknesses and inter-dependencies.
> - Adopt a supply diversification strategy to reduce reliance on single suppliers.
> - Proactively implement process innovations, such as automation, to improve supply and logistic efficiencies.
> - Create contingency plans to 'flex' infrastructures in times of crisis, such as establishing emergency temporary structures or converting existing non-health structures.

Activities of People

Dr. Wayne Cascio served as a member of the People task force at IHF[8]. This group focused on leadership, staff, and the healthcare workforce. The underlying context was that as health systems respond to the pandemic, hospital leaders will have to sharpen their focus on meeting their staff's core needs, ensuring their well-being, and sustaining motivation to help them deal with this rapidly changing situation. Dr. Cascio notes two aspects of this focus: (1) Those who provide care – their physical, psychological, financial, social, and emotional well-being, and (2) Those who receive care – providing person-centered care in a crisis - patients and the communities in which they live (building trust). It was estimated

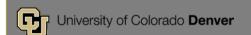> **Advice from the People Taskforce**
> - Take care of yourself so you can take care of others.
> - Use regular check-ins with staff in order to maintain resilience.
> - Be aware of your energy level and take the time to recharge.
> - Lead with compassion and a sense of urgency, as well as vulnerability.

[6] https://www.youtube.com/watch?v=RUMSSr7HEsY&feature=emb_logo
[7] https://business.ucdenver.edu/harc
[8] https://www.ihf-fih.org/wordpress/wp-content/uploads/2020/08/IHF-People-Infographic.pdf

that fully 14% of COVID cases involve healthcare workers. Hence their well-being is a paramount concern, as it was even before the onset of the pandemic. *Before* the pandemic hit, base rates for burn-out were running as high as 35% for nurses and 44% for physicians.

Dr. Cascio interviewed senior leaders at the St. Joseph's Health System, a prominent academic healthcare organization in New Jersey and metropolitan New York City (SJHSNY)[9], and reported his insights in the *HARC Research Brief,* Volume 2, Issue 1, Fall 2020. He interviewed the CEO, COO, and Chief Medical Officer of SJHSNY and summarized their responses in the following areas: succession planning, the use of technology for data analytics and reporting, the use of telemedicine visits, issues related to stress and the labor pool, engaging employees through effective communications, addressing the public's fear of going to a hospital for treatment, and the use of technology to support dignity in death/end-of-life care.

At the November 2020 virtual conference of the International Hospital Foundation, the session on "Transforming the Agenda of 'People' – Beyond COVID-19" featured three healthcare professionals with direct, frontline experience in dealing with people-related issues during the pandemic. They are Dr. Bryant Adibe – System V. P., Chief Wellness Officer, Rush University System for Health – Chicago; Dr. Mary Nash – V. P., Organizational Development – NYU Langone Health, New York City; and Dr. Lara Mitchell – Consulting Physician, Medicine for the Elderly, Glasgow, Scotland. Here are some highlights of their presentations—the recording of which is available at the IHF site[10].

Dr. Adibe mentioned during the forum that Rush Health System used "reverse rounds" with staff members (from medicine, psychiatry, HR) to ask, "How are you doing"? They emphasized optimism and hope and referred staff members with symptoms of excessive stress or burn-out to other professionals who could provide care. Over the long haul, the staff is suffering from fatigue and anticipatory anxiety. They worry about sustainability. Rush provided a location where workers could find peace and a getaway – a Center for Clinical Wellness – focusing on staff's long-term well-being. That center also offers EAP counseling for couples, as well as child and eldercare.

Dr. Mary Nash of NYU Health stated that "when the pandemic struck New York City in March 2020, all faculty in the Department of Medicine were surveyed to identify those with critical-care skills or who could be trained in critical care. There were no layoffs, but 2,000 redeployments of staff to provide frontline critical care. NYU Langone Health innovated quickly, moving from a whiteboard to Excel to build a tech platform to identify roles to be filled and people to fill them."

Many staff members were afraid to work in units that cared for COVID-19 patients, asking, "will I have personal protective equipment"? There was also much fear of mass transit and fear of infecting one's family, so NYU Langone hired a hotel consultant to handle staff members' reservations. Staff members with children were offered childcare subsidies and onsite childcare. NYU Langone tried to remove barriers and to support staff members according to their needs. All education and training moved online, and the rate of individuals taking training stayed high. When follow-up interviewers asked why, staff members said they needed "post-traumatic growth".

Dr. Lara Mitchell from Scotland reflected that only 30% of her elderly patients had smartphones when the pandemic hit, but in one week, the nursing staff ensured that all had iPads or smartphones. Some were unfamiliar with the technology and asked, "What's Mary doing in the iPad?" The frontline healthcare workers showed much pride and desire to serve the community. They recognized that they have needed to innovate for years, and the pandemic accelerated the innovation process. They implemented a wellness-consulting team for staff members – psychiatrist, clinical psychologist, and nurse. There was initial resistance, as healthcare professionals asked, "what are you doing in our unit"? Over time, however, resistance turned to acceptance.

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[9] See *HARC Research Brief,* Volume 2, Issue 1, Fall 2020
[10] https://www.ihf-fih.org/covid-19-virtual-forum/

Conclusion: The HARC Perspective

Lessons from the COVID-19 pandemic should lead us to transform the delivery of healthcare across the globe. Most healthcare organizations are planning to restart "business as usual." Returning to the non-urgent work and initiating the "new normal" is in process. Some are also responding to the potential second wave of COVID-19.

Health systems are carefully considering impacts on patients as well as employees, focusing on their needs, managing the change process, and designing appropriate safety protocols. In the meantime, some care models are shifting to telehealth, virtual care, and care at home. Health systems and public health authorities are trying to keep up with this transformation.

Beyond all these concerns, the 'global village' concept has emerged as a point of concern and acceptance. The concern emerged during the pandemic's initiation and spread, whereas acceptance followed the lessons learned from each other, across societies and countries, to fight the pandemic's threat to humankind. Above all, the importance of collaborative action, from policy to practice, across countries and societies, has emerged to be more important than ever.

The next challenge is clear: Will we be able to live up to that expectation?