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# INNOVATION EXPRESS

A QUARTERLY PUBLICATION FROM  
INNOVATIVE HEALTHCARE INSTITUTE



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INNOVATION  
**EXPRESS**

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# HOW CAN TECHNOLOGY HELP WITH MENTAL HEALTH ISSUES?

**Annie Keller**

It's estimated that [450 million people](#) have some sort of mental health issue. Since normal visits to mental health providers have been cut down or eliminated in the wake of the pandemic, various technologies have been implemented to help.

[Virtual mental health visits](#) (or "telemental health") are one way of doing so, and the number of visits have soared. People are using telemental health visits to deal with existing issues as well as new issues resulting from the pandemic. For example, some people are using the services because of issues with social isolation during quarantine.

Prompt diagnosis of mental health issues is important, because effective treatment cannot begin without a diagnosis, but technology can help. Most mental health problems are diagnosed on the basis of symptoms, and it can be difficult to distinguish between one condition and another.



**"PROMPT DIAGNOSIS OF MENTAL HEALTH ISSUES IS IMPORTANT, BECAUSE EFFECTIVE TREATMENT CANNOT BEGIN WITHOUT A DIAGNOSIS"**

[New technology](#) involving MRI may be a solution. Researchers at the University of Tokyo developed an algorithm that could sort through MRI images of patients with different mental health conditions and distinguish between them based on subtle changes in the brain present in one condition but not in the other. The diagnosis from the scans matched the diagnosis given to the patient 85 % of the time.

Stress is a common problem and one that can lead to a variety of later mental health issues. A [mental health](#) app called "Rose" is attempting to reduce those problems. The app uses questionnaires and journal entries to collect data that can be used to monitor stress levels, identify triggers of stress, and track other measures of well-being. When a problem is noted, the app gives its user content that is tailored to help their well-being, including video content and more.

These new technologies are just a few examples of innovation in healthcare, specifically for dealing with mental health problems remotely during a global health crisis like coronavirus disease (COVID-19).

# HOW WILL THE CLINICAL TRIAL LANDSCAPE CHANGE AFTER COVID-19?

**Lauren Styczynski**

The coronavirus disease (COVID-19) pandemic has had a major impact on medical research, causing many ongoing clinical trials to be put on hold due to limit the risk of infection. According to [clinicaltrials.gov](https://clinicaltrials.gov), over 1300 clinical studies were paused or cancelled due to the coronavirus pandemic. At the same time, numerous studies have been initiated in a feverish race to find a vaccine or cure for COVID-19.

Research teams around the world have had to find innovative ways to conduct their studies, including moving some study procedures online and utilizing video conferencing technology. For example, some mental health biomarker studies that used therapy sessions with psychiatrists and licensed clinical social workers in their study procedures had to move their procedures online. In studies where the procedures are strict, such as a cancer chemotherapy study requiring many in-person visits, the regulatory bodies have moved to be more [flexible](#), actually allowing for fewer face-to-face visits and limiting these in person visits to ones that are essential and cannot be done via telemedicine.

What is the clinical trial space going to look like in a post-COVID world?

There are two likely scenarios. Some trials will be able to resume recruitment and enrollment and move forward with their study with minor changes to the protocol. Other trials may remain on hold due to a lack of human and / or financial resources. Trials that remain delayed may cause problems for sponsors and pharmaceutical groups to get their products to market.

There is a third possible scenario, in which investigators incorporate virtual consultations, remote monitoring, and other types of technology, resulting in a safer and possibly more efficient manner. Clinical trial teams are also likely to continue this trend, according to the [ACRP](#) group. Study staff may spend less time in the office and more time working remotely from home. Data monitoring techniques are likely to become more remote and agile, leading to better databases and a stronger documentation trail.

Further innovations are necessary for conducting research studies and clinical trials within this “new normal” healthcare environment.



# WATCH: DEFINING THE NEW NORMAL HEALTHCARE



## THE NEW NORMAL IN LABORATORY MEDICINE

Dr. Zisis Kozlakidis, PhD, MBA, FLS, Editor-in-Chief, IDDB, discusses the new normal in [laboratory medicine](#), post-COVID-19.

## THE NEW NORMAL IN CLINICAL RESEARCH

Professor David Kerr, Oxford speaks about the new normal in [clinical research](#) brought about by the coronavirus (COVID-19) pandemic.



## THE NEW NORMAL IN GYNECOLOGICAL MALIGNANCIES



Thomas J Herzog MD, University of Cincinnati Cancer, and Paul & Carolyn Flory, Obstetrics and Gynecology, discuss the new normal in [gynecological malignancies](#) and how cancer care is evolving, post COVID-19.

## Featured Article: Pharmacy and Therapeutics Committee Preparedness Plan for COVID-19 in Saudi Arabia



[Click to watch Laila Abu Esba discuss the article on YouTube](#)

In a recent study published in the [Global Journal on Quality and Safety in Healthcare](#) (JQSH), Laila Abu Esba and colleagues from the Ministry of National Guard Health Affairs (MNGHA) in Saudi Arabia detail how the country has been handling the crisis.

The Pharmacy and Therapeutics (P&T) committee from there has been responsible for providing guidelines for how to handle the COVID-19 pandemic.

The committee's plan is a multipart one. First, the committee went through all studies in the PubMed database that highlighted either COVID-19 itself or any potential treatment options. Those studies were then categorized into three subsets: actual human trials, studies simply done on the virus itself, and articles that simply discussed treatments in theory. At the time of their analysis, there were 20 studies found; 14 were from the first category, two from the second, and four from the third. After a thorough review and consideration, several drugs were recommended to be kept in good stock.

The committee also recognized that one of the most challenging problems during the initial outbreak was low supply of many essential drugs. As a result, they coordinated with the pharmaceutical planning department to ensure adequate supplies of drugs anticipated to increase in demand would be secured and stocked.

The third part of the plan involved estimating the potential number of patients even before there was a spike in cases. Both the model and factors such as global reports that 20% of cases would be severe enough to require intensive care were used, and the authors planned accordingly. The committee summarized their recommendations at the time of their study in the [JQSH article](#).

To estimate the number of patients that would require antiviral drugs based on the local number of affected cases, predictions using other countries' trends, and an estimation of 20% of cases being moderate to severe, and to review this decision periodically based on the trend of actual number of cases.

**By pre-planning and with daily updates, the committee was able to proactively secure a well-stocked inventory of drugs.**



# TOP 5 HEALTHCARE INNOVATIONS IN 2020

Annie Keller

## Closed-Loop Spinal Cord Stimulation.

Chronic pain is a disabling condition for millions, and new ways to reduce pain are welcomed. Spinal cord stimulators have existed for many years, but their open-loop system cannot adjust stimulation as needed. Closed-loop systems can be adjusted as needed for pain.

Virtual health care. Coronavirus pushed the need for digital health visits into the public eye, but it had been growing for some time before that. One virtual health care company had business grow over 1000% in one month; patients of many different virtual providers have expressed nothing but praise for the technology.

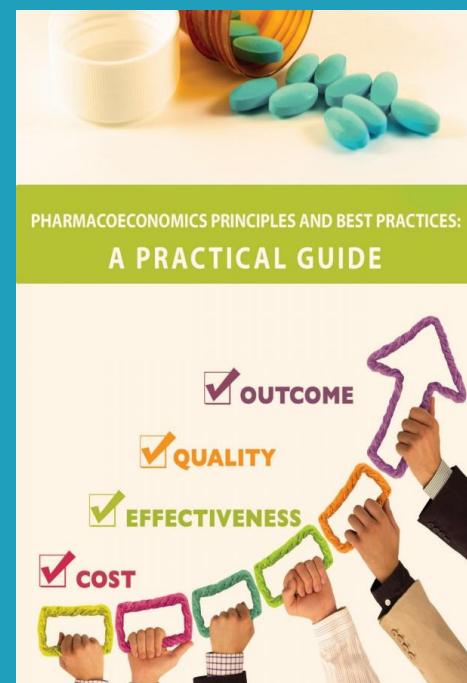
Robotic exoskeletons. For most paralyzed people, keeping muscles that are no longer being used toned and fit requires a great deal of physical therapy. The battery-powered suits developed by several companies allow paralyzed people the ability to move muscles no longer under their control. Stroke patients paralyzed on one side of the body that used such devices were able to walk more rapidly and increased rehabilitation rates.

Wearable device data. 23% of adults report wearing some sort of device that tracks health and exercise, such as smart watches and fitbit devices.

That data could be a potentially important source of medical information – if it's being collected. 4 million people have volunteered their data to Evidation, a company that tracks the data and allows large pharmaceutical companies to analyze it. Several peer-reviewed studies have already come from that data.

Open-source medtech. The coronavirus brought the need for certain devices, like ventilators, to the forefront. Aiming to cut down on shortages, university groups pooled their resources together to develop a low-cost, easy to make and operate ventilator. While the shortages have eased, the potential for rapid innovation in medicine by making such information public is still huge.

## Pharmacoeconomics Principles and Best Practices: A Practical Guide



[Available for purchase on Amazon.](#)

# TOP 10 INNOVATIONS JOURNALS ARTICLES

Valerie K. Clark

Innovations Journals, in association with Innovative Healthcare Institute and Allen Press, is excited to share the top 10 most read and most downloaded articles for 2020 in its two premiere journals – The Global Journal on Quality and Safety in Healthcare (JQSH) and Journal of Immunotherapy and Precision Oncology (JIPO).



In JQSH, the #1 most read and most downloaded article in 2020 is **“Involving the Family in Patient Care: A Culturally Tailored Communication Model”** by Editor in Chief, Dr. Abdul Rahman Jazieh, Susan Volker, and Saadi Taher. More than 2000 views and downloads have earned this article the #1 title for JQSH.

Saja Hamed’s recent publication entitled **“Community Pharmacy Practice During COVID-19 Pandemic: A Perspective From the Middle East”** has quickly topped the chart with more than 1200 views and downloads. Dr. Hamed discusses her article in detail in this [video](#).

One of the first articles published in JQSH is still popular today, with more than 900 views and downloads; that is, “Pricing of monoclonal antibodies in the United States,” by Alvaro San-Juan-Rodriguez, Natasha Parekh, Terri V. Newman, and Inmaculada Hernandez. Journal of Immunotherapy and Precision Oncology. All top 10 JQSH articles can be viewed [here](#).



In JIPO, the #1 most read and most downloaded article in 2020 is **“Extracellular Signal-Regulated Kinase (ERK) Inhibitors in Oncology Clinical Trials”** by Haelee M. Chin, David K. Lai, and Gerald S. Falchook. This article has been viewed more than 1000 times and downloaded more than 175 times.

Another popular JIPO article, with more than 700 views and 150 downloads, is **“Are cancer patients at higher risk of death with COVID-19”** by Jacob J. Adashek, Joud Hajjar, Roy F. Chemaly, and Razelle Kurzrock.

Also, be sure to read classic editorial by Dr. Aung Naing, Editor in Chief of JIPO, entitled **“Being realistic and optimistic in curing cancer.”** This article has been viewed and downloaded more than 1000 times in 2020. All top 10 JIPO articles can be viewed [here](#).



# INDUSTRY NEWS

## BIO EL PASO JUAREZ AND THE MCA INNOVATION CENTER CO-HOST A SERIES OF EVENTS TO FEATURE THE LIFE CYCLE OF MEDICAL DEVICE MANUFACTURING

The MCA Innovation Center and BIO El Paso – Juarez (BIO EPJ) are co-hosting a series of events titled From Start to Finish: Medical Device Manufacturing in an effort to bring together the innovator/startup space that the MCA Innovation Center is trying to grow and the medical device manufacturing industry that is so prevalent in the Paso del Norte region and catalyzed by BIO El Paso–Juarez.

"As innovators and entrepreneurs start to develop products, it's important to have your sites on production and sales," says Nancy Lowery, Director of Innovation at the MCA Foundation. "Events like these help parties on both sides come together to strengthen industries and economic development."

The event series will continue with case studies of companies who have had to navigate this space in various stages of production on November 3rd and will finish with a showcase of regional manufacturers who have transitioned from Contract Manufacturers to developing their own product on November 10th.

The From Start to Finish event series will also serve to introduce those who are interested in medical devices and the industry to a virtual summit and trade show that BIO EPJ will be hosting. The virtual summit will feature keynote speakers and panels focused on manufacturing and the biomedical industry. The event will also feature a trade show for companies to market their products and capabilities.

The 2020 BIO El Paso–Juarez Virtual Medical Device Summit and Trade Show will bring together regional and international stakeholders to discuss some of the most pressing issues facing the medical device manufacturing industry today," says Jackie Butler, Senior Director of Operation for BIO El Paso–Juarez. "This event will also celebrate and honor companies who have been on the front lines of combating COVID-19 by producing and providing life-saving PPE and medical devices locally and across the globe."


For more information or to register to attend any and all parts of the From Start to Finish series, visit the MCA Foundation website at [mcamericas.org](http://mcamericas.org). For more information or to register to attend the BIO El Paso Juarez Virtual Summit and Tradeshow, visit [bioelpasojuarez.org](http://bioelpasojuarez.org).

### FOR MORE INFORMATION:

**Jackie Butler, Senior Director of  
Operations**

**BIO El Paso–Juarez**

**[jackie@bioelpasojuarez.org](mailto:jackie@bioelpasojuarez.org)**



# webinar

## THE INNOVATIVE USES OF COMMUNICATION TECHNOLOGY WITHIN A MEDICAL ENVIRONMENT

NOVEMBER 18 AT 9 A.M. EDT

### ABOUT OUR SPEAKERS

#### DR. ALAN O'DONNELL

He is a physician assistant in congenital cardiothoracic surgery at Cincinnati Children's Hospital Medical Center in Cincinnati, OH. His primary areas of interest are complex/neonatal congenital heart surgery, pediatric mechanical circulatory support devices and pediatric heart/lung transplantation. Additionally, he is interested in the creation of congenital heart surgery videos with novel production methods with the intent of making complex procedures understandable to all along the spectrum of care.

#### ABOUT DR. ATAL ABUSANAD

She obtained The Royal College of physicians and surgeons of Canada (RCPSC) certifications in internal medicine and medical oncology in 2010 and 2012, respectively. Her post fellowship training focused on breast and gastrointestinal malignancies. In addition to being (RCPSC) certified Internist and Medical oncologist, she completed Clinician-Investigator fellowship (CIP), coupled with MSc in experimental medicine of molecular oncology from McGill University. She has many publications in peer-reviewed journals with publications in JGO from ASCO, JAMA-Oncology, frontiers in pharmacology, and poster presentations at ASCO and AACR. She is a fellow of RCPSC and a member of ASCO and ACP.

**REGISTER FOR THE WEBINAR [HERE](#).**



# FEATURED EVENT: SOCIAL DETERMINANTS OF HEALTH SYMPOSIUM

December 8

The events of 2020 – COVID-19, economic downturn and social unrest – have put an even greater emphasis on health disparities. Attend Modern Healthcare's Social Determinants of Health Symposium virtually on December 8 to harness the knowledge and tools needed to address the social determinants of health. From behavioral health and pending legislation to the role community health organizers play in addressing health disparities, find out what you need to know to aid your communities during the pandemic and beyond. Register: <https://bit.ly/3dFk5qJ>



## CALL FOR CONTRIBUTORS – NEW NORMAL HEALTHCARE

We are looking for contributors in various disciplines to record short videos or write brief articles about the New Normal in Healthcare for 2020 and beyond. The Innovative Healthcare Institute (IHCI) has created this resource to provide viewers with video content and articles related to changes in healthcare resulting from the COVID-19 pandemic.

If you have any questions please contact [info@innovativehci.com](mailto:info@innovativehci.com) with your name, title, company and topic of interest or submit this [form](#).

# QUALITY IMPROVEMENT IN HEALTHCARE

## FALL 2020 MASTERCLASS MOVES TO VIRTUAL ON DECEMBER 4-5, 2020!

Receive hands-on training on how to design and write publishable manuscripts for your own quality improvement in healthcare projects.

The Innovative Healthcare Institute is proud to offer a pair of masterclasses focusing on quality improvement and patient safety, presented by the Global Journal on Quality and Safety in Healthcare. These classes are designed for health professionals, physicians, nurses, pharmacists, allied health sciences, quality improvement specialists, and healthcare managers and leaders.

*"The masterclass for Quality Improvement Projects was very helpful and exceeded my expectations. I will definitely recommend this class for all the health care professionals who are interested in quality improvement projects."*

~Rafiullah Khan MD, MBA, Hematology and Oncology fellow, University of Cincinnati

**REGISTER AT: [QIMC.eventbrite.com](https://www.eventbrite.com/qimc)**

**Day 1 - Friday,  
December 4th  
8:00 AM - 1:00 PM EST**

**"Designing Quality  
Improvement Projects"**

**Day 2 - Saturday,  
December 5th  
8:00 AM - 1:00 PM EST**

**"Publishing Quality  
Improvement Projects"**

**Presented by:**

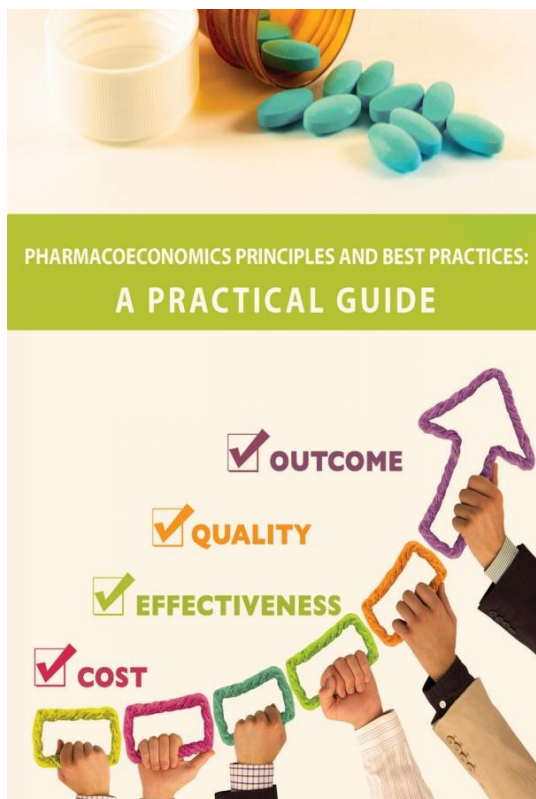


**JQSH**   
Global Journal on Quality  
and Safety in Healthcare

Volume 3 | Issue 2 | April - June 2020



# Pharmacoeconomics Principles and Best Practices: A Practical Guide



This Guide is a collaborative effort among multidisciplinary experts from different healthcare sectors. The Guide tackles many practical issues related to pharmacoeconomics that are of great importance to healthcare providers, policy and decision makers, and healthcare leaders. We hope the readers will find the Guide beneficial.

[Available for purchase on Amazon.](#)

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## CALENDAR OF UPCOMING EVENTS

**NOVEMBER 18**

The Innovative Uses  
of Communication  
Technology within a  
Medical Environment

[Register here](#)

.....

**DECEMBER 4-5**

Masterclass on  
Quality  
Improvement  
Projects

[Register here](#)

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**JUNE 10-11, 2021**

Advancing  
Healthcare  
Innovation  
Summit 2021

[Call for  
Abstracts](#)