

# State of CDER

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FDLI Annual Conference

May 20, 2021

# Pandemic Response Highlights

- Coronavirus Treatment Acceleration Program (CTAP)
  - 440+ trials reviewed by FDA
  - 600+ development programs for therapeutic agents in the planning stages
  - 1000+ Expanded Access requests
  - 1 approved treatment
  - 10 treatments under emergency use authorization
- 22+ guidances on clinical development for COVID-19 therapeutics

## Expanded CDER's drug shortage program to include supply chain surveillance

- ▶ Integrates data to help assess risk to critical medicines to treat COVID-19 aiming for earlier detection and response to supply disruptions
- ▶ Provides visibility into availability, supply, and demand
- ▶ Used to address drug shortages
- ▶ We are enhancing this system by investigating additional data sources and advanced analytics
  - ▶ Phased process to expand coverage to additional products



# Drug Supply Chain Signal Detection

*Supply chain surveillance is based on examining multiple signals for supply chain disruption*

## Drug Identification

*Identify critical drugs for supply chain surveillance*

## Integrated Supply Chain Assessment

*Conduct analysis based on integrated data on key signals to determine if a drug is vulnerable to supply chain disruptions*

## Mitigation and Management

*Conduct additional review for drugs with signals of supply chain disruptions*



# Enforcement Against Fraudulent COVID-19 Claims

**The Challenge:** Protecting patients when the market is flooded with products making unproven claims. Products are unlawful and put patients at risk.

(Examples: chlorine dioxide, colloidal silver, CBD, copper, honey, botanical oils)

## **Actions Taken:**

- ▶ Issued 113 warning letters for products claiming to treat COVID-19
- ▶ Issued 15 warning letters to Internet pharmacies claiming to treat COVID-19
- ▶ Removal of contaminated hand sanitizer products

# Meeting User-Fee Goals During The Pandemic

CDER is on-track to meet most review performance goals despite constraints around on-site inspections

We have been conducting mission-critical and prioritized inspections and increasingly relying on alternative approaches:

- ▶ Reviewing facilities' inspection history to assess feasibility of relying on records or trusted-partner inspections
- ▶ Requesting records or other information directly from facilities in lieu of drug and biological product inspections
- ▶ Remotely evaluating operations by livestreamed video; other remote or live interactions with facility operators

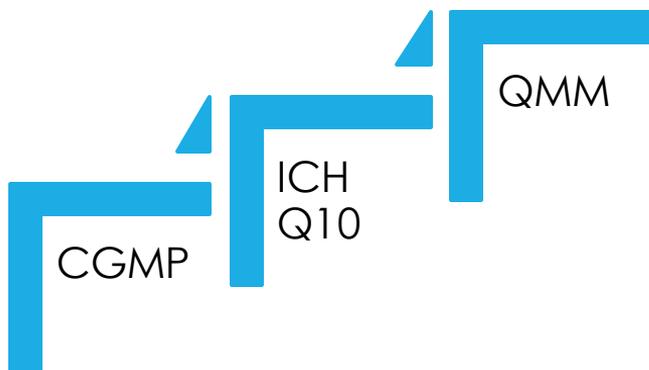
# Meeting User-Fee Goals During The Pandemic

- ▶ Published [Remote Interactive Evaluations of Drug Manufacturing and Bioresearch Monitoring Facilities During the COVID-19 Public Health Emergency, Guidance for Industry](#) (April 2021)
- ▶ Published [guidance](#) that answers FAQs on impact of travel restrictions on application review, CDER's use of alternate tools for inspections, other supply chain and inspection topics (August 2020)
- ▶ From March 2020 - March 2021, use of alternative tools informed:
  - 150 ANDA, 84 NDA, 11 BLA
  - These actions included: 41 ANDA approvals, 59 NDA approvals, 11 BLA approvals

# Programmatic Updates

- ▶ User fees account for about 70% of CDER's annual budget
- ▶ The current, 5-year authorization for PDUFA, GDUFA and BSUFA runs through FY22
- ▶ FDA and industry are engaged in reauthorization activities for PDUFA VII, GDUFA III and BSUFA III
- ▶ Public meetings to present the proposed reauthorization packages will occur later this year
- ▶ FDA will then deliver the proposed packages to Congress in January
- ▶ New UFA program – Implementation of OTC Monograph User Fee Act (OMUFA)

# Steps to Quality Management Maturity (QMM)



- ▶ Current Good Manufacturing Practice (CGMP) establishes a minimum standard for systems that assure proper design, monitoring, and control of manufacturing processes and facilities
- ▶ ICH Q10 outlines an effective pharmaceutical quality system applied throughout the product lifecycle to facilitate innovation and continual improvement and strengthen the link between pharmaceutical development and manufacturing activities
- ▶ Quality Management Maturity (QMM) fully realizes the 21st century pharmaceutical quality vision requiring a transparent method of evaluating and communicating the maturity of the quality management system

# Quality Management Maturity (QMM)



- ▶ Multidisciplinary, multi-center working group to facilitate the development of a QMM rating program for drug manufacturers
- ▶ Two pilot programs
  - ▶ One focused on domestic manufacturers of finished dosage form products
  - ▶ One focused on foreign manufacturers of active pharmaceutical ingredients
  - ▶ Site assessments to begin in May; pilots to end at the end of September
  - ▶ CDER will use the information from the pilots and other information to formalize criteria to objectively measure a manufacturing site's QMM

## We are leveraging integrated technology capabilities to support and modernize CDER's internal operations

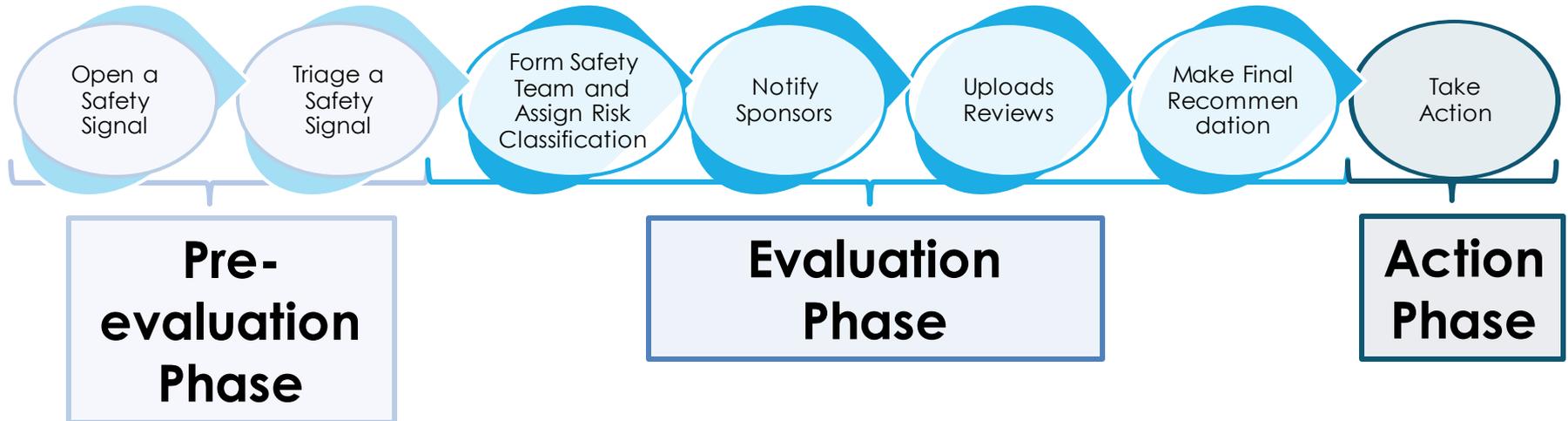
- Portal for data intake from external stakeholders including sponsors
- Workflow management for automating CDER's internal work processes and capture key decisions and knowledge
- Analytics capabilities to support decision-making

## These technology capabilities for data intake, workflow management and analytics will support multiple priority initiatives across the center

- Knowledge Aided Structured Assessment (KASA)
- Modernization of new drug review
- OMUFA work process support
- Drug supply chain surveillance improvements
- Safety signal management

# Post-market Safety Modernization Lifecycle Signal Tracker (LiST)

- ▶ Modernizes and streamlines tracking of safety signals across a drug product's lifecycle
- ▶ Enables tracking of safety signals with improved interdisciplinary collaboration and easy access to all safety signal-related documents in one location
- ▶ Launched in April 2020



- ▶ Harmonizing standards internationally
  - ▶ Worked to finalize several International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) guidelines including on pharmaceutical product lifecycle management
  - ▶ Working to secure ICH endorsement to pursue guideline work to advance patient focused drug development
  - ▶ CDER led the ICH group that developed a new draft ICH Guideline integrating the nonclinical (S7B) and clinical (E14) assessment of cardiac safety for new drugs
    - ▶ Focuses on using mechanistic nonclinical assays to reduce the need for clinical trials

## **Pre-ANDA Program**

Collaborate early  
for long-term  
success

## **Center for Research on Complex Generics**

Enhance research  
collaborations with industry

# Since 2008, 100+ Complex Generic Approvals Annually

## Notable First Complex Generic Approvals

Glucagon for injection  
(RLD: Glucagon)

Treats severe hypoglycemia

28 Dec. 2020

Ferumoxytol injection  
(RLD: Feraheme)

Treats iron deficiency anemia

15 Jan. 2021

Imiquimod cream  
(RLD: Zyclara)

Treats actinic keratoses and external genital and perianal warts

26 Jan. 2021

Linaclotide capsules  
(RLD: Linzess)

Treats IBS and chronic idiopathic constipation

9 Feb. 2021

Loteprednol etabonate ophthalmic gel  
(RLD: Lotemax)

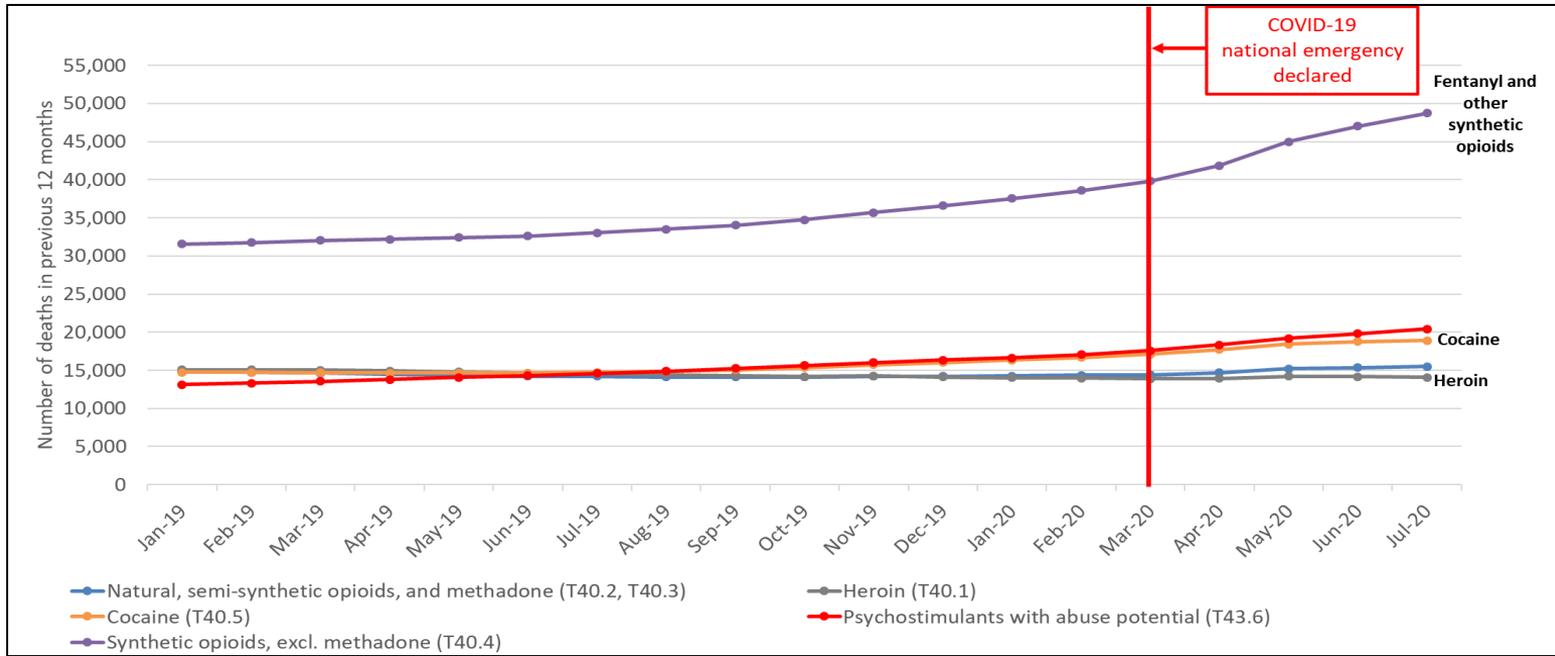
Treats post-operative inflammation and pain following ocular surgery

10 Feb. 2021

# Opioids: Impact of COVID-19



Since the start of the pandemic, opioid overdose deaths have accelerated – largely from illicit fentanyl



Provisional data on overdose deaths before and during COVID-19 pandemic (past 12-month totals)

Source: Data extracted 2/26/2021 from NVSS Dashboard: <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm#dashboard>

# Bolstering Our Efforts to Fight the Opioid Epidemic

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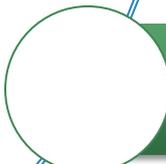
Decrease exposure and Prevent New Addiction

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Support the Treatment of those with Opioid Use Disorder

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Foster the Development of Novel Pain Treatment Therapies

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Improve Enforcement and Assess Benefit-Risk

# FDA Supports Efforts to Expand Access to Buprenorphine Treatment for OUD



Improving access and availability will positively impact public health

FDA recognizes that there are barriers to treatment – a complex, multi-faceted problem

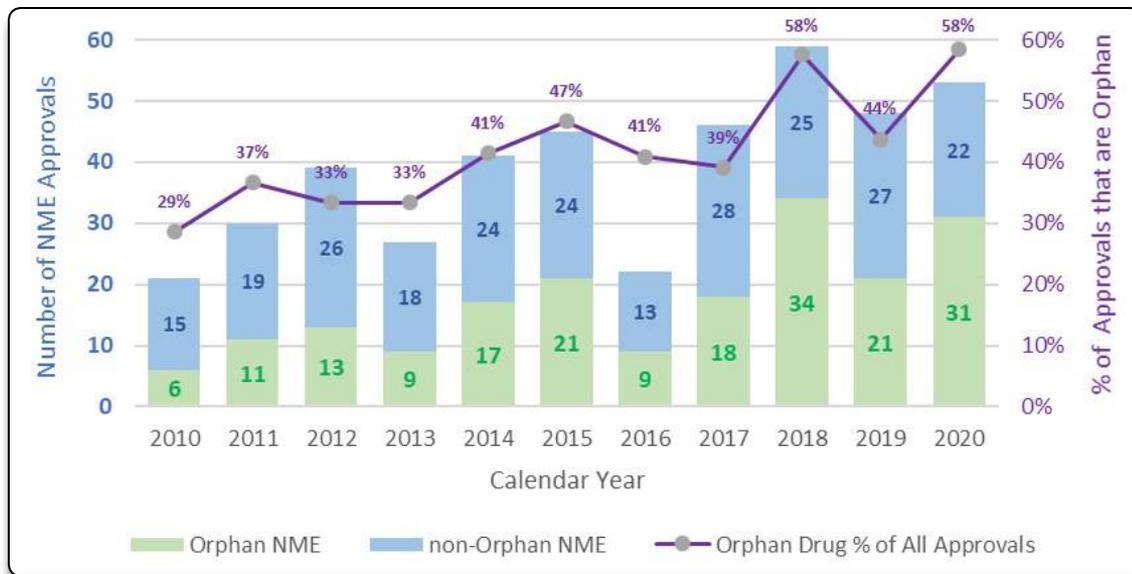
Stigma against people with OUD and against MOUD permeates social and cultural attitudes but can also be found within institutional practices and regulations

Prioritizing education and training for treating patients with OUD, in both health professional schools and treatment settings, will be critical for improving buprenorphine access

- ▶ Areas of focus include:
  - ▶ Rare diseases and Neurodegenerative diseases
  - ▶ Infectious/Emerging/Neglected Diseases
  - ▶ Biosimilar insulin

# Rare Diseases

- ▶ 58% of all new drug approvals in CDER for 2020
- ▶ 31 Approved NMEs with Orphan Designation in 2020
- ▶ 29 of the 31 (94%) novel orphan approved used one or more expedited program
- ▶ A record-breaking 284 pediatric rare-disease designation requests



- ▶ In 2020, new orphan treatments for:
  - ▶ Hutchinson-Gilford Progeria Syndrome
  - ▶ Hereditary angioedema
  - ▶ CAR T cell therapy for mantle cell lymphoma
  - ▶ Factor to control bleeding in patients with Hemophilia A or B with inhibitors
- ▶ Orphan Drug Technology Modernization effort
- ▶ CDER's Rare Disease Development Council
- ▶ Rare Disease Cure Accelerator

# Insulin Gains New Pathway to Increase Competition

- ▶ Insulin and certain other biologic drugs transitioned to a different regulatory pathway (March 2020)
- ▶ Availability of safe and effective biosimilar and interchangeable versions of these treatments is expected to increase patient access, adding more choices and potentially reducing costs
- ▶ Opens a pathway for products that are proposed as biosimilar to, or interchangeable with, the transitioned products, including insulin

# Looking Forward

We have continued to acquire talent during the pandemic and attrition has been lower

The success of large platform trials and use of clinical networks will likely shape future research

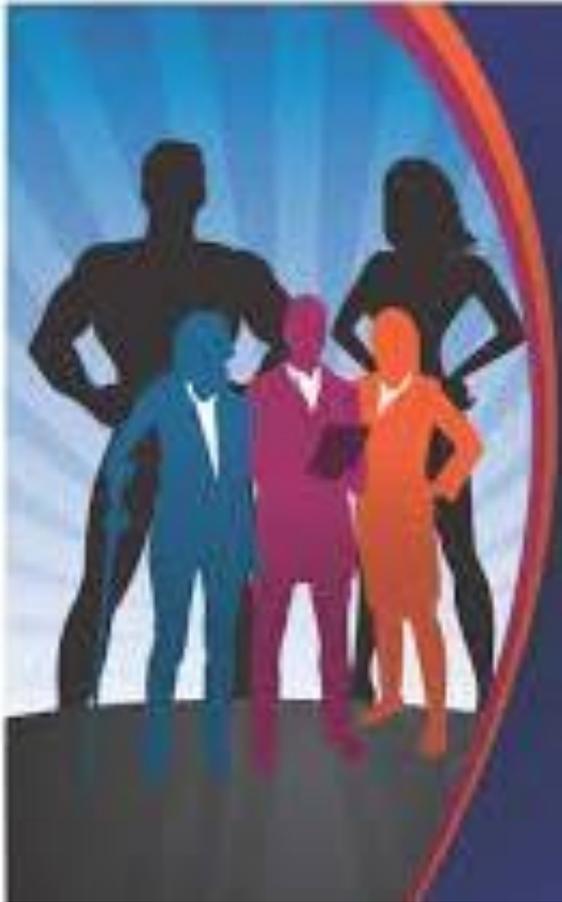
We have all become much more familiar with video-interaction and other interactive technology

We have gained experience in the use of decentralized clinical trials

The importance of enrolling a diverse clinical population and understanding the barriers to achieving that goal is front and center

We have expanded our tools to evaluate manufacturing facilities and investigative sites

RWE played a central role in understanding COVID-19, generating hypothesis and in the safety monitoring of therapeutics



**Thank You  
To The  
CDER Team!**