The Impact of COVID-19 Pandemic on Non-COVID-19 Clinical Trials

Janet Wu
MS Candidate in Regulatory Science, Class of 2022
Faculty Mentor: Dr. Eunjoo Pacifici, PharmD, PhD.
The COVID-19 pandemic
✓ Placed tremendous strain on the clinical trial (CT) enterprise
✓ Research groups were quickly redeployed to conduct COVID-19 related CTs
✓ Redirection of resources along with temporary halting of in-person visits placed strains on the studies in non-COVID-19 therapeutic areas
Project
Scope

Examine the impact of COVID-19 on CTs across different therapeutic areas, regions, and funding types
Methods

1. Search within clinicaltrials.gov and EudraCT databases for all international CTs preceding pandemic

2. Search within the same databases with the keyword, “COVID-19” for CTs after the onset of the pandemic

3. Analyze the relevant studies for trends and patterns
## Methods

### 19 different therapeutic areas of CTs were searched

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Oncology (Neoplasm, Cancer, Tumor)</td>
</tr>
<tr>
<td>2.</td>
<td>Mental – Anxiety, Depression, Bipolar Disorder, Post-traumatic And Schizophrenia</td>
</tr>
<tr>
<td>3.</td>
<td>Pain And Headache</td>
</tr>
<tr>
<td>4.</td>
<td>Metabolism – endocrinology, Cushing, Addison, Gigantism, Hyperthyroidism, Hypothyroidism, Hypopituitarism, Multiple endocrine neoplasia, PCOS, Precocious puberty</td>
</tr>
<tr>
<td>5.</td>
<td>Bone and Muscle</td>
</tr>
<tr>
<td>6.</td>
<td>Antibiotic and Antimicrobial and antivirus – Infectious, Infection, Communicable Disease</td>
</tr>
<tr>
<td>7.</td>
<td>Gastroenterology and Digestive – constipation, diarrhea, liver cirrhosis, hepatitis, hemorrhoids, irritable bowel syndrome (IBS), GERD, PUD, IBD, pancreatitis, Crohn, Gallstones</td>
</tr>
<tr>
<td>8.</td>
<td>Cardiology and Anticoagulant - Angina, Heart Attacks, Heart Failure, And Stroke</td>
</tr>
<tr>
<td>9.</td>
<td>Autoimmune And Immunology</td>
</tr>
<tr>
<td>10.</td>
<td>Chronic – Diabetic, Hyperglycemia, Hypertension, Hypercholesterol</td>
</tr>
<tr>
<td>11.</td>
<td>Urology - kidney stones, Enlarged Prostate, BPH, Incontinence, Hematuria, Overactive Bladder</td>
</tr>
<tr>
<td>13.</td>
<td>Anesthesia</td>
</tr>
<tr>
<td>14.</td>
<td>Allergy (Hypersensitivities, Sensitivity, and Sensitive)</td>
</tr>
<tr>
<td>15.</td>
<td>Respiratory – Asthma, COPD, Emphysema, Bronchiecta</td>
</tr>
<tr>
<td>16.</td>
<td>Dermatology – eczema, psoriasis, acne, rosacea, ichthyosis, vitiligo, hives, seborrheic dermatitis</td>
</tr>
<tr>
<td>17.</td>
<td>Ophthalmology – Cataracts, glaucoma, Retinal, Macular degeneration</td>
</tr>
<tr>
<td>18.</td>
<td>Gynecological – Cervical, Dysplasia, Menstrual, Pelvic, Ovarian, Uterine</td>
</tr>
<tr>
<td>19.</td>
<td>Anemia and Iron Deficiency</td>
</tr>
</tbody>
</table>
Number of Global CTs per Month (2016-2020)
Impact of COVID-19 on Global CTs (2016-2020)

- Increase of CTs
- 10% Decrease in non-COVID studies internationally

<table>
<thead>
<tr>
<th>Year</th>
<th>Total CTs (Non-COVID-19 + COVID-19) No.</th>
<th>Non-COVID-19 CTs No.</th>
<th>COVID-19 CTs No.</th>
<th>Trend of Non-COVID-19 CTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>24000</td>
<td>15000</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>25000</td>
<td>16000</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>26000</td>
<td>17000</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>27000</td>
<td>18000</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>28000</td>
<td>19000</td>
<td>9000</td>
<td></td>
</tr>
</tbody>
</table>
Impact of COVID-19 on Oncology CTs

[Graph showing the trend of total CTs and various categories of CTs over the years 2020 to 2022, with different colors representing different categories such as Covid19, Onco, Chronic, Res, Anti-B, Cardio, Pain, Mental, Neuro, Imm, Anes, Allergy, Meta, Derma, Gastro, Uro, Oph, Other, Gyn, Ane, Bo&Mu, Onco 2020, Onco 2019.]
Impact of COVID-19 on CTs by Therapeutic Area

- 14% of CTs were COVID-19 related CTs
- <1% decrease in oncology CTs in 2020
Impact of COVID-19 on CTs by Funding Source

- Overall decrease in the number of non-COVID-19 studies in 2020
- 10% decrease in industry-funded studies in 2020 compared to 2019
Number of Active CTs in Taiwan

![Line graph showing the number of active CTs in Taiwan from 2019 to 2020, with lines for COVID-19 and non-COVID-19 cases.]
Number of CTs in European Union

- Similar trend to Clinical trial.gov in 2020
- The Non-COVID-19 CTs decrease 19% in Mar-May 2020 in EU.
- However, Non-COVID-19 CTs only decreased 6% for the EU in overall 2020.
Conclusions

• The COVID-19 pandemic
  • Caused an immediate slowing of the international CTs from March to May 2020 across all therapeutic areas and funding types.

• As the global pandemic continued, however, CTs have resumed back to their pre-pandemic levels.
References


TFDA, 2020. Suggestions and General Principles on Drug Clinical Trial Conduction during the pandemic prevention period of severe special infectious pneumonia. s.l.:TFDA.


Thank You