

ANTIVIRAL DRUGS EVALUATION ON COVID-19 PATIENTS UNDER SPECIFIED CO-MORBID CONDITION: DATA ANALYSIS

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ABSTRACT:

In pandemic period of COVID-19, apart from age, immunodeficiency, and invaded super infection conditions some other co-morbid conditions are becoming footprint of increase mortality rate and invitation to mutant COVID genome viability. Findings are to be specially contribute towards the evaluation of laid co-morbid condition which drag down the patient's community population onto dense of a critical situation. This critical condition of health will initiate the development-specific antiviral associated with antibiotic regime formulation. The methodology buds from investigation of data analysis of based on online collection of case studies and interpretation to get the core causes on a point where the health care is becoming a challenge for the investigation of specified drugs and formulation. COVID-19 is a burning investigatory topic where exact center-point of co-morbid categories could be evaluated in pandemic situation. And invention of specific medication tools to specify the remedial measures could be develop on behave of critical case as per the co-morbid categories in order to decline sharply the epidemic condition of COVID in population. On collecting COVID-19 information's from various countries and various resources, hence opens no exclusion criteria's on observation studies. It was observed that patient's condition before taking medicines and after medicines are showing complex situations as health concern in different ways in COVID-19 patients. Thus, the treatment with antiviral drugs was not satisfactory for COVID-19. Therefore, vaccines are the alternative as acquired immunity support.

KEYWORDS: COVID-19, Antivirals, Comorbid condition, Data- Analysis, Effectiveness.

1. INTRODUCTION:

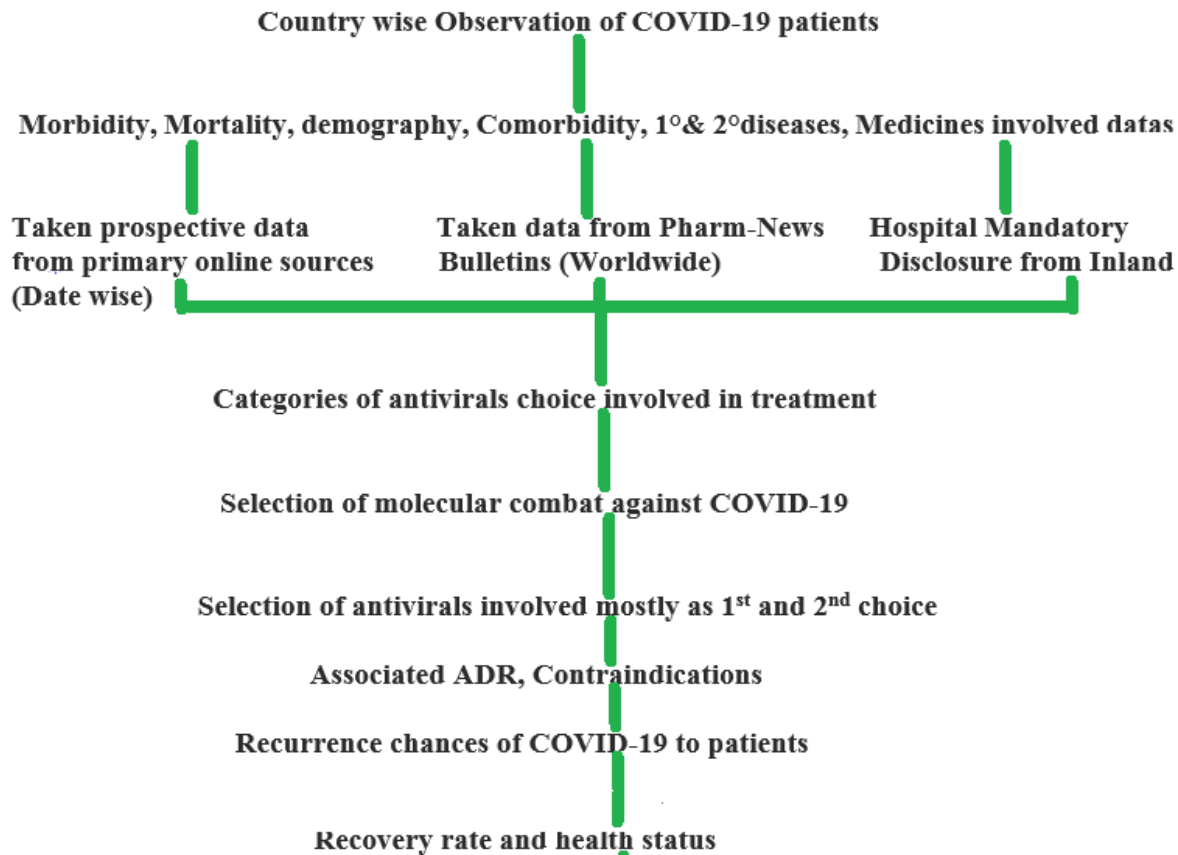
The coronavirus disease 2019 (COVID19) has been declared a pandemic by the World Health Organisation (WHO) and need to be arrest tactfully with different preventive measures along with medications. For several compounds allegedly active against SARS-CoV-2, including lopinavir, nelfinavir, nitazoxanide, favipiravir, and hydroxychloroquine found no substantial anti-SARS-CoV-2 activity, while the proven drug remdesivir showed activity at nontoxic concentrations. Diabetic patients have increased morbidity and mortality rates, and more hospitalization and intensive care unit (ICU) admissions have been associated with these rates and in patients with COPD, the risk of contracting COVID-19 has been found to be 4 times greater than in patients without COPD.

This study is based on the significance of antiviral drug effect on covid-19 patients. Antiviral drug is an emerging method used in hospitals and clinics to cure the existing corona patients and novel therapeutic uses. This first part of the literature-based study is done to evaluate antiviral drugs on corona patients as there is no comprehensive review is available till date on evaluation of antiviral drug on corona patients to the best of our knowledge. A comprehensive search was done and a number of web hits were recorded from different databases by using different keywords. One of the most complex scientific fields of contemporary antiviral drug tested on covid-19. Drug evaluation has been effect - and mechanism of action approach.

2. METHODOLOGY:

2.1. Study design

The investigation of the observational findings are under the COVID-19 victims are fixed to antiviral drugs only which is the lifesaving medicines on the vacancy of vaccines. To get the accurate and precise data the volunteer's selection criteria's and national boundaries has been open. The demographic and racial specificities limitations were excluded and focused on more datas extractions. The primary resource was targeted to collect raw data aimed towards originality.



2.2. Basic Protocol

The foremost work is to extract topic relevant literature from online. There relevant topic concern papers were reassembled as per the requirement of objective initially started from basic information to topic related supportive concern points. On the basis of available literature, literature evaluation is very important. This guides to get the exact track to target the observation data modules from various parameters like Mortality, morbidity, comorbid focus, ADR, demography, pathophysiological disease and its associated antivirals.

The review evaluation would bring right assessments data assembling, extracted common tables preparation and associated graphs. This allows to understand the gap of research and thus for opening options to publish research papers as a scope on the lieu of research outcomes. The fundamental points to be carried on this protocol is as followings:

1. The viability of COVID-19 data's has to be extracted from worldwide COVID-19 susceptible population through various validated resources like WHO data, inpatient's data collected from special hospital

recommended for COVID-19, imprint data's from News bulletins, Online datas from many health portals like Medline, Medscope and online PMC (PubMed) journals metadatas etc.

2. The impact of coronavirus on pandemic level on going through the mortality and morbidity level has to be considered in investigation timelines. Also, the comorbid conditions on new patients and recovered patients. Also the antiviral Involvement has to be traced out among these cases.

3. All above could be collected from worldwide to get the exact results on antiviral therapy devoid from races discriminations.

4. Comparative studies of antivirals to understand the choice of drugs on different stages of COVID-19 inpatients.

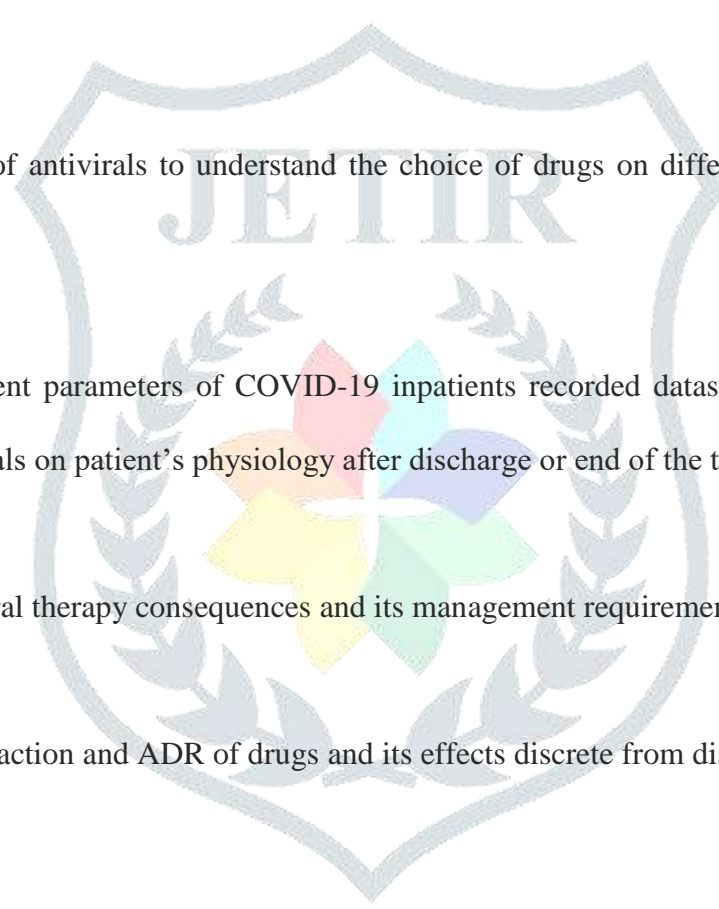
5. Tabulations on different parameters of COVID-19 inpatients recorded datas, recurrence cases and its causes, Impact of antivirals on patient's physiology after discharge or end of the therapy.

6. Tracing of after antiviral therapy consequences and its management requirements.

7. Findings of Drug interaction and ADR of drugs and its effects discrete from diseased states and recovery default health status.

8. There should be less exclusion criteria's so that the more exposure of different dimensional facts could be collected and then could be made a specified direction for aligning meaningful outcome.

9. Conclusions are assessed, based on statistical reports and consequence should satisfy the best antiviral contribution to inpatients population to prove its therapeutic profiles. Thus, an idea could be evolved whether treatment of COVID-19 could stand positively in front of prophylactic vaccines on health market.



3. RESULT & DISCUSSION:

On the initial stage of work the observation has to be remark as it's the observation project. The data has to be pulled out from the various resources regarding COVID-19. The data foremost need to be trace are the findings of COVID-19 patients suffering from various clinical diseases, which reflects from the symptomatic evaluation. Initiations of these diseases are from secondary bacterial infections associated with the immune-deficient physiological state of the patients. The data's of 500 patients where collected from different resources base on demography, diseased state and hospitalized inpatients. The details were taken from the hospital files on COVID-19 in India as well as data were collected from various news medical bulletins and hospital records to WHO from the sites. These data's were tabulated on **Table-1**. Here in this data includes total incubated patients in ICUs, as per the age (no age bars), pregnancy, tobacco smokers. Also, associated diseased like Pneumonia, Congestive Obstructive Pulmonary disease (COPD), Asthma, Super-infections like UTIs & RTIs, Cardiovascular disease, Chronic renal failure, hypertension along with some comorbid condition which drastically reduce the immunity such as diabetes, immune deficient diseases and associated medicines of immunosuppressant categories taken for above mentioned diseases in pandemic state. In-Patients IP numbers date of hospitalization and discharge date was mentioned on **Table-1**.



id	sex	patient_entry_date	date_vym_date	discharge_date	intubated	pneumonia	age	pregnancy	diabetes	copd	asthma	immupr	hypertens	other_dis	cardiovas	obesity	renal	chrbtobacco	contact_n	covid_19_icu			
18129f	2	1	4/5/2020	2/5/2020	9999-99-9	97	2	27	97	2	2	2	2	2	2	2	2	2	2	1	97		
18990f	2	1	19-03-2020	17-03-2020	9999-99-9	97	2	24	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
167980	1	2	8/4/2020	1/4/2020	9999-99-9	2	2	54	2	2	2	2	2	2	2	2	2	2	2	2	99	1	2
060948	2	2	2-17-04-2020	*****	9999-99-9	2	1	30	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
080105	1	2	2-13-04-2020	13-04-2020	22-04-2020	2	2	60	2	1	2	2	2	2	2	2	2	2	2	2	99	1	2
10ee08	2	2	2-16-04-2020	16-04-2020	29-04-2020	2	1	47	97	1	2	2	2	2	2	2	2	2	2	2	99	1	1
1.79c-96	1	2	2-22-04-2020	13-04-2020	9999-99-9	2	2	63	97	2	2	2	2	1	2	2	2	2	2	2	99	1	2
0ee1f5	1	1	21-05-2020	18-05-2020	9999-99-9	97	2	56	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
12b074	1	1	22-04-2020	18-04-2020	9999-99-9	97	2	41	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
006201	1	2	23-04-2020	18-04-2020	9999-99-9	1	1	39	2	2	2	2	2	2	2	2	2	2	2	2	99	1	2
00fc54	1	2	22-04-2020	22-04-2020	9999-99-9	2	1	46	2	2	2	2	2	2	2	2	2	2	2	2	99	1	2
17e2a5	1	1	29-04-2020	27-04-2020	9999-99-9	97	2	45	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
128f5c	2	2	2/5/2020	2/5/2020	9999-99-9	2	2	28	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
11c741	1	1	25-05-2020	23-05-2020	9999-99-9	97	2	54	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
07442e	2	1	7/6/2020	4/6/2020	9999-99-9	97	2	38	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
194bf2	1	1	20-04-2020	16-04-2020	9999-99-9	97	2	34	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
158aef	1	1	24-06-2020	15-06-2020	9999-99-9	97	2	49	2	1	2	2	2	2	2	2	2	2	2	2	99	1	97
0e1aeb	2	1	30-04-2020	20-04-2020	9999-99-9	97	2	40	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
100b0a	2	1	5/5/2020	1/5/2020	9999-99-9	97	2	39	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
075b9d	2	1	*****	1/5/2020	9999-99-9	97	2	63	97	1	2	2	2	1	2	2	2	2	2	2	99	1	97
06cd20	2	1	19-04-2020	19-04-2020	9999-99-9	97	2	54	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
154fea	1	2	2/6/2020	2/6/2020	9999-99-9	2	2	25	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2
1af0f1	1	1	25-04-2020	22-04-2020	9999-99-9	97	2	45	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
1e248a	2	1	30-04-2020	29-04-2020	9999-99-9	97	2	40	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
000b01	1	1	15-05-2020	6/5/2020	21-05-2020	97	2	61	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
18375e	2	1	20-06-2020	18-06-2020	9999-99-9	97	2	40	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
0e9e93	1	1	27-04-2020	25-04-2020	9999-99-9	97	2	31	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
032d0a	2	1	30-04-2020	20-04-2020	9999-99-9	97	2	40	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
13e1ed	1	1	1/4/2020	28-03-2020	9999-99-9	97	2	33	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
187b28	1	1	15-05-2020	14-05-2020	9999-99-9	97	1	49	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
18e14a	1	2	22-06-2020	17-06-2020	9999-99-9	2	2	32	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2
16582b	1	2	21-04-2020	15-04-2020	9999-99-9	2	2	83	2	1	1	2	2	1	2	2	2	2	2	2	99	1	2
147d1a	2	1	23-04-2020	19-04-2020	9999-99-9	97	2	43	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
0d908b	2	2	24-04-2020	21-04-2020	9999-99-9	2	2	56	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
0d0a0b	1	1	20-04-2020	9/4/2020	9999-99-9	97	2	54	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
04610e	1	1	21-04-2020	21-04-2020	9999-99-9	97	2	38	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
17294f	2	2	27-04-2020	27-04-2020	28-04-2020	2	1	77	97	2	2	2	2	1	2	2	2	2	2	2	99	1	2
009cd3	2	1	26-04-2020	21-04-2020	9999-99-9	97	2	37	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
061abb	2	1	2/5/2020	29-04-2020	9999-99-9	97	2	32	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
057x2d	2	1	2/6/2020	27-05-2020	9999-99-9	97	1	36	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
02ba62	2	2	20-04-2020	13-04-2020	9999-99-9	2	2	47	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
006d4d	1	2	26-04-2020	23-04-2020	26-04-2020	2	1	53	2	1	2	2	2	2	2	2	2	2	2	2	99	1	2
0772b1	1	1	28-04-2020	23-04-2020	9999-99-9	97	2	37	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
0c3d51	2	2	3/5/2020	27-04-2020	9999-99-9	2	2	42	97	1	2	2	2	2	2	2	2	2	2	2	99	1	2
08d12f	1	1	19-06-2020	15-06-2020	9999-99-9	97	2	53	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
1277f2	2	2	21-03-2020	27-03-2020	7/4/2020	2	1	77	97	2	1	2	2	2	2	2	2	2	2	2	99	1	2
1a81fc	1	2	3/4/2020	1/4/2020	9999-99-9	2	2	41	2	1	2	2	2	2	2	2	2	2	2	2	99	1	2
18e6de	2	2	24-04-2020	1/4/2020	9999-99-9	2	2	55	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
06149e	2	2	24-04-2020	14-04-2020	9999-99-9	2	2	52	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
020c7b	2	2	23-04-2020	13-04-2020	9999-99-9	2	2	48	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
03145e	2	2	*****	7/4/2020	13-04-2020	1	1	57	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
104423	1	2	29-03-2020	19-03-2020	9999-99-9	2	1	48	2	2	2	1	2	2	2	2	2	2	2	2	99	1	2
09feca	2	1	13-04-2020	*****	9999-99-9	97	2	28	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
37006	1	1	4/5/2020	29-04-2020	9999-99-9	97	2	43	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
72058	2	1	6/5/2020	1/5/2020	9999-99-9	97	2	59	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
038dc	1	1	*****	8/6/2020	9999-99-9	97	2	40	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
1401a8	1	1	1/4/2020	29-03-2020	9999-99-9	97	2	63	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
104a01	1	1	29-03-2020	28-03-2020	9999-99-9	97	2	32	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
097d1a	2	1	*****	*****	9999-99-9	97	2	27	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
14f12e	1	1	2/4/2020	1/4/2020	9999-99-9	97	2	44	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
02b790	2	1	31-03-2020	27-03-2020	9999-99-9	97	2	85	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
062001	2	1	22-04-2020	18-04-2020	9999-99-9	97	2	34	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
10a174	2	1	23-04-2020	19-04-2020	9999-99-9	97	2	40	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97
0d8e15	2	2	24-04-2020	24-04-2020	9999-99-9	2	2	73	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2
11d040	1	1	18-05-2020	18-05-2020	9999-99-9	97	2	52	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97
17d9eb	1	1	3/6/2020	31-05-2020	9999-99-9	97	2	54	2	1	2	2	2	2	2	2	2	2	2	2	99	1	97
1d101b	2	1	21-04-2020	20-04-2020	999																		

Gender-wise patient’s distribution data on **Table-2** were for Male-1 and Female-2 were taken for the comparative determination of same diseased conditions and comorbid condition of patients mention on Table -1. All inpatients are from ICUs are taken from the scattered data distributions. And the decreased in disease viabilities comparative to gender are discovered from column first to column 2nd last. That means on the particular age range of last column the diseased gender of categories in 2nd last column reduce is viabilities as compare to foremost 1st column. And 4th column from last is showing the COVID-19 positivity of the individual patients, so, here 1 (one) shows each patient’s data’s here is for COVID-19 only.

sex	patient_id	intubated	pneumonia	age	pregnancy	diabetes	copd	asthma	inmsupr	hypertens	other_dis	cardiovasi	obesity	renal	thritobacco	contact_o	covid_res	icu	Deceased	Age range	
2	2	2	1	47	97	1	2	2	2	2	2	2	2	2	2	99	1	1	1	40	
1	2	2	1	78	2	2	2	2	2	1	2	2	1	2	2	1	1	1	1	70	
2	1	97	2	57	97	2	2	2	2	2	2	2	2	2	2	1	99	1	97	2	50
2	1	97	2	34	97	1	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	34	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	40	2	2	2	2	2	1	2	2	1	2	2	2	99	1	97	2	40
2	1	97	2	38	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
2	2	2	1	31	97	1	2	2	2	2	2	2	2	2	2	2	99	1	2	2	30
1	1	97	2	50	2	1	2	2	2	2	1	2	2	2	2	2	99	1	97	2	50
1	1	97	2	46	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	40
2	2	2	2	48	97	2	2	2	2	2	2	2	1	2	2	2	99	1	2	1	40
1	1	97	2	36	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
2	2	2	2	54	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2	1	50
2	2	2	1	33	97	2	2	2	2	2	1	2	2	2	2	1	99	1	2	1	50
1	1	97	2	42	2	2	2	2	2	2	2	2	1	2	2	2	99	1	97	2	40
2	1	97	1	70	97	1	2	2	2	2	2	2	2	2	2	2	99	1	97	2	70
1	1	97	2	23	1	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	20
2	2	2	2	39	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2	2	30
2	2	2	1	54	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2	1	50
1	1	97	2	35	2	2	2	2	2	1	2	2	1	2	2	2	99	1	97	2	30
1	1	97	2	34	2	2	2	2	2	2	1	2	2	2	2	2	99	1	97	2	30
1	1	97	2	36	2	2	2	2	2	2	2	2	2	2	1	2	99	1	97	2	30
1	1	97	2	41	2	1	2	2	2	2	2	2	2	2	2	2	99	1	97	2	40
2	1	97	2	49	97	2	2	2	2	1	2	2	2	2	2	2	99	1	97	2	40
1	1	97	2	48	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	40
2	2	2	2	58	97	2	2	2	2	2	1	2	1	2	2	2	99	1	1	1	50
1	1	97	1	63	2	2	1	1	2	2	2	2	2	2	2	2	99	1	97	2	60
2	1	97	2	33	97	2	2	2	2	2	2	2	1	2	1	2	99	1	97	2	30
2	2	2	2	41	97	2	2	2	2	2	2	2	2	2	1	2	99	1	2	2	40
2	1	97	2	32	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	50	2	2	2	2	2	1	2	2	2	1	2	2	99	1	97	2	50
2	2	2	2	69	97	2	2	2	1	2	1	2	2	2	2	2	99	1	2	1	60
1	1	97	2	35	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	73	2	1	2	2	2	2	2	2	2	2	2	2	99	1	97	2	70
2	1	97	2	34	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	33	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	32	2	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
2	1	97	2	33	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
2	2	2	2	47	97	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	40
2	2	2	2	39	97	2	2	2	2	2	2	2	2	2	2	2	99	1	2	2	30
2	1	97	2	37	97	2	2	2	2	2	2	2	1	2	2	2	99	1	97	2	30
1	1	97	2	52	2	2	2	2	2	1	2	2	1	2	2	2	99	1	97	2	50
2	1	97	2	43	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	40
2	1	97	2	35	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	30
1	1	97	2	51	2	2	2	2	2	1	2	2	1	2	2	2	99	1	97	2	50
2	1	97	2	35	97	1	2	2	2	2	2	2	2	2	1	2	99	1	97	2	30
1	2	2	1	35	2	2	2	2	2	2	2	2	2	2	2	2	99	1	2	2	50
1	1	97	2	63	2	1	2	2	2	1	2	2	2	2	2	2	99	1	97	2	60
2	1	97	2	29	97	2	2	2	2	2	2	2	2	2	2	2	99	1	97	2	20

Table-2: This data is extracted from the database of COVID-19 patients comorbidity based on demographic split.

Many antiviral trials was carried out to combat the COVID-19 condition. But, only few antivirals are existed for best result to fight against the corona virus. Even the best one revealed through lower side-effects and more specific to broader demographic area. As per the table-3 different carbon and hydrocarbon compound were allocated and the generated effects and its under training trails were discussed. But all of this effects

were 100% to virus but its stability and efficiency is depends upon the carbon chain size. Thus, even if the antiviral drugs are more effective to the patients, its cannot assures the reliability of the drugs entities for total curability, described on detail in **Table-3**.

	A	B	C	D	E
1	id unique id values	gen	carbon and hydrogen compounds	source	score
2	AAAA	0	COc1cccc(NC(=O)Cc2ccc(NC(=O)N3CCCC3)cc2)c1	generated	99.9
3	AAAB	0	C=CCNC(=O)CNc1cccc(C(=O)N(C)CCc2cccc2)c1	generated	99.9
4	AAAC	0	CC(=O)Nc1ccc(S(=O)(=O)Nc2ccc(C)c(C)c2)cc1	training	99.9
5	AAAD	0	CCOC(=O)C1=C(C(=O)OCC)C(c2cccc(Cl)c2)NC(=O)N1	generated	99.9
6	AAAE	0	NC(=O)c1ccc(NC(=O)C(C(=O)O)NC(=O)c2cc(-c3cccc3)ccc2Cl)nn1	generated	99.9
7	AAAF	0	COC(=O)c1ccc2c(c1)N(C(=O)c1ccc(C)cc1)CC(C)(C)O2	generated	99.9
8	AAAG	0	Cc1ccc(C(=O)Nc2ccc(C(=O)N3CCOCC3)cc2)cc1	training	99.9
9	AAAH	0	Cc1ccc(C(=O)N2CCN(C(=O)c3ccc(O)cc3)CC2)c(C)c1	training	99.9
10	AAAI	0	CN(C)C(=O)N1CCC(NC(=O)CCc2cccc2)CC1	generated	99.9
11	AAAJ	0	Cc1cc(C)cc(C(=O)N(CC(=O)NO)c2ccc(Cl)cc2)c1	generated	99.9
12	AAAK	0	CC(C)n1cc(C(=O)N2CCCC(c3nc(C4CCCO4)no3)C2)cn1	generated	99.9
13	AAAL	0	CC(C)CCN1C(=O)C(C)SC(=O)C1Cc1ccc(O)cc1	generated	99.9
14	AAAM	0	O=C(c1cccnc1)N1CC2CN(C(=O)C3CCCC3)CC2C1	generated	99.9
15	AAAN	0	CC1CCC(NC(=O)c2ccc(CNC(=O)c3cc(C(C)(C)C)cc(C(F)(F)F)c3)cc2)CC1	generated	99.9
16	AAAO	0	CCN(CC)CCCNc1c2cccc2nc2cc(C)ccc12	generated	99.9
17	AAAP	0	CC(C)C(NC(=O)CC(O)(C(=O)O)c1cccc1)C(c1cccc1)c1cccc1	generated	99.9
18	AAAQ	0	Cc1ccc(-c2cc(C(=O)N3CCCC3)no2)cc1	generated	99.9
19	AAAR	0	COc1cccc(CN(C)C(=O)Cc2cccc2OC)c1	generated	99.9
20	AAAS	0	CC(=O)OC1CCC2(C)C(CCC3(C)C2CC=C2C4C(C)C(C)CCC4(C(=O)O)CCC23C)C1(C)C	training	99.9
21	AAAT	0	CCOC1ccc(C(=O)N2CCC(c3cccc(C)C(=O)c3)CC2)cn1	generated	99.9
22	AAAU	0	Cc1ccc(Oc2cc(C)[nH]c(=O)c2C#N)cc1	generated	99.9
24	AAAW	0	CCCCN(c1sc(-c2ccc(Br)cc2)nc1)C(C)C	generated	99.9
25	AAAX	0	COc1ccc(Cl)cc1NC(=O)Cc1ccc2c(OC)c(OC)ccc12	generated	99.9
26	AAAY	0	O=C(CNC(=O)c1ccc(F)cc1)Nc1cccc(C(F)(F)F)c1	training	99.9
27	AAAZ	0	O=S(=O)(c1cccc(F)c1)N1CCc2cccc2C1	training	99.9
28	AABA	0	O=c1nc(N2CCOCC2)oc2cc3c(cc12)OCCO3	generated	99.9
29	AABB	0	Cc1noc(CCCn2ccc(CN3CCCC3)n2)n1	generated	99.9
30	AABC	0	Cc1cccc(C)c1N1CCC(C(=O)NCCNC(=O)c2cccc2)CC1	generated	99.9
31	AABD	0	CC(CNC(=O)c1cc(F)ccc1F)c1cccc1Cl	generated	99.9
32	AABE	0	CCCCCCCCCCCCCCCC(O)C(O)C(O)CCCC(O)CCCCCCCC	generated	99.9
33	AABF	0	CCCCCCCCCCCCCCCCCCCCCCCCCCCCNC(C)=O	generated	99.9
34	AABG	0	CNC(=O)C=Cc1ccc([S+](O-))Cc2cccc2)cc1	generated	99.9
35	AABH	0	CCCCCCCCCCCCCCCC[n+1]ccc(N)c(OC)c1	generated	99.9
36	AABI	0	CNc1nc(N2CCCC2)nc(N2CCCC(N)C2)n1	generated	99.9
37	AABJ	0	CCCCCCCCCCCCCCCCCCCCCCCCCCCC(=O)OCC1cccc1	generated	99.9
38	AABK	0	CCOC(=O)C=C(C)CCC=C(C)CCC=C(C)CCC=C(CC)COC	generated	99.9
39	AABL	0	CC(CNC(=O)NCCN1CCOCC1)NC(=O)OC(C)(C)C	generated	99.9
40	AABM	0	CCCCCCCCCCCCCCCCCCCCCCCCCCCCOCC(O)C(O)COP(=O)(O-))OCCOCCOCCOCCOCC	generated	99.9
41	AABN	0	O=C(CNS(=O)(=O)Cc1ccc1)NCC(F)(F)F	generated	99.9
42	AABO	0	Cc1cccc1C(=O)C=Cc1ccc(Cl)c(Cl)c1	generated	99.9

Table-3: Its shows the antiviral structural carbon-hydrogen elucidation as per their sources.

Figure-1, shows the rapid evaluation of antivirals on population of 20 million, which was ascertained from various hospital ends on worldwide study. The data was collected for ongoing studies from January 2019 upto January 2021. On study it was discovered that Oseltamivir was used many times against COVID-19 spontaneously and severely from beginning most of the hospital for better curability results. Acyclovir, Ganciclovir and cidofovir were used moderately on inpatients.

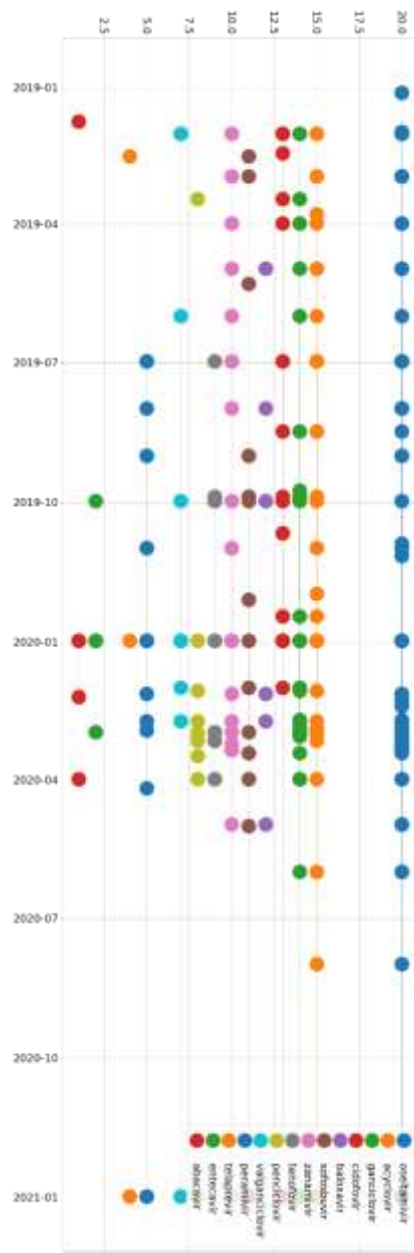


Figure-1: Potential activities of antivirals from Jan, 2019 -Jan, 2021

Figure-2, represents the sensitivity of antivirus on worldwide inpatients population from various hospital corners. Oseltamivir, followed by Zanamivir and Acyclovir shows its much requirement.

Different mortality rate has been calculated as per the different location of earth, like latitude and longitude as per different countries in world. It was found that max. Mortality rate were found in America, India, Brazil, Spain, Peru etc. Most of the places of countries which were connected densely with air route. And secondly, the country came over COVID-19 attacks were connected directly and indirectly with China through tourism and business consents. Thus, its datas were split here with **Table-4** below.

	Country	Confirmed	Deaths	Mortality Ratio	Latitude	Longitude	CountryCode	
0	Afghanistan	39145	1446	3.69	33.9391	67.70995	AF	
1	Albania	12787	370	2.89	41.1533	20.16833	AL	
2	Algeria	50400	1698	3.37	28.0338	1.659626	DZ	
3	Andorra	1753	53	3.02	42.5462	1.601554	AD	
4	Angola	4363	159	3.64	-11.2027	17.87389	AO	
5	Antigua and Barbuda	97	3	3.09	17.0608	-61.7964	AG	
6	Argentina	664799	14376	2.16	-38.4161	-63.6167	AR	
7	Armenia	47877	942	1.97	40.0691	45.03819	AM	
8	Australia	26980	861	3.19	-25.2744	133.7751	AU	
9	Austria	39984	777	1.94	47.5162	14.55007	AT	
10	Azerbaijan	39524	580	1.47	40.1431	47.57693	AZ	
11	Bahamas	3618	80	2.21	25.0342	-77.3963	BS	
12	Bahrain	67014	231	0.34	25.9304	50.63777	BH	
13	Bangladesh	353844	5044	1.43	23.6849	90.35633	BD	
14	Barbados	189	7	3.7	13.1938	-59.5432	BB	
15	Belarus	76357	796	1.04	53.7098	27.95339	BY	
16	Belgium	106887	9959	9.32	50.5038	4.469936	BE	
17	Belize	1706	22	1.29	17.1898	-88.4977	BZ	
18	Benin	2325	40	1.72	9.30769	2.315834	BJ	
19	Bhutan	261	0	0	27.5141	90.4336	BT	
20	Bolivia	131990	7731	5.86	-16.2902	-63.5887	BO	
21	Bosnia and Herzegovina	26081	790	3.03	43.9158	17.67908	BA	
22	Botswana	2567	13	0.51	-22.3285	24.68487	BW	
23	Brazil	4591364	5	3.01	13810	-14.235	-51.9253	BR
24	Brunei	145	3	2.07	4.53527	114.7277	BN	
25	Bulgaria	19283	779	4.04	42.7338	25.48583	BG	
26	Burkina Faso	1929	56	2.9	12.2383	-1.56159	BF	
27	Burundi	476	1	0.21	-3.37306	29.91889	BI	
28	Cambodia	275	0	0	12.5656	104.991	KH	

					7.36972			
29	Cameroon	20690	416	2.01	2	12.35472	CM	
					56.1303			
30	Canada	149939	9294	6.2	7	-106.347	CA	
	Central African				6.61111			
31	Republic	4802	62	1.29	1	20.93944	CF	
					15.4541			
32	Chad	1164	82	7.04	7	18.73221	TD	
33	Chile	449903	12345	2.74	-35.6751	-71.543	CL	
					35.8616			
34	China	85314	4634	5.43	6	104.1954	CN	
					4.57086			
35	Colombia	784268	24746	3.16	8	-74.2973	CO	
36	Comoros	470	7	1.49	-11.875	43.87222	KM	
					9.74891			
37	Costa Rica	68059	781	1.15	7	-83.7534	CR	
38	Croatia	15340	257	1.68	45.1	15.2	HR	
					21.5217			
39	Cuba	5270	118	2.24	6	-77.7812	CU	
					35.1264			
40	Cyprus	1654	22	1.33	1	33.42986	CY	
	Czech				49.8174			
41	Republic	55464	555	1	9	15.47296	CZ	
					56.2639			
42	Denmark	24822	643	2.59	2	9.501785	DK	
					11.8251			
43	Djibouti	5407	61	1.13	4	42.59028	DJ	
44	Dominica	24	0	0	15.415	-61.371	DM	
	Dominican				18.7356			
45	Republic	109737	2074	1.89	9	-70.1627	DO	
46	Ecuador	129892	11171	8.6	-1.83124	-78.1834	EC	
					26.8205			
47	Egypt	102375	5822	5.69	5	30.8025	EG	
					13.7941			
48	El Salvador	27954	819	2.93	9	-88.8965	SV	
	Equatorial				1.65080			
49	Guinea	5018	83	1.65	1	10.2679	GQ	
					15.1793			
50	Eritrea	364	0	0	8	39.78233	ER	
					58.5952			
51	Estonia	3033	64	2.11	7	25.01361	EE	
52	Ethiopia	71083	1141	1.61	9.145	40.48967	ET	
53	Fiji	32	2	6.25	-16.5782	179.4144	FJ	
					61.9241			
54	Finland	9288	343	3.69	1	25.74815	FI	
					46.2276			
55	France	508456	31447	6.18	4	2.213749	FR	
56	Gabon	8716	54	0.62	-0.80369	11.60944	GA	
					13.4431			
57	Gambia	3542	110	3.11	8	-15.3101	GM	
					42.3154			
58	Georgia	4140	25	0.6	1	43.35689	GE	

					51.1656		
59	Germany	279025	9423	3.38	9	10.45153	DE
					7.94652		
60	Ghana	46153	299	0.65	7	-1.02319	GH
					39.0742		
61	Greece	16286	357	2.19	1	21.82431	GR
					12.2627		
62	Grenada	24	0	0	8	-61.6042	GD
					15.7834		
63	Guatemala	87442	3154	3.61	7	-90.2308	GT
					9.94558		
64	Guinea	10434	65	0.62	7	-9.69665	GN
					11.8037		
65	Guinea-Bissau	2324	39	1.68	5	-15.1804	GW
					4.86041		
66	Guyana	2535	69	2.72	6	-58.9302	GY
					18.9711		
67	Haiti	8646	225	2.6	9	-72.2852	HT
68	Honduras	72675	2222	3.06	15.2	-86.2419	HN
					22.3964		
69	Hong Kong	5049	104	2.06	3	114.1095	HK
					47.1624		
70	Hungary	20450	702	3.43	9	19.5033	HU
					64.9630		
71	Iceland	2476	10	0.4	5	-19.0208	IS
					20.5936		
72	India	5646010	90020	1.59	8	78.96288	IN
73	Indonesia	257388	9977	3.88	-0.78928	113.9213	ID
					32.4279		
74	Iran	432798	24840	5.74	1	53.68805	IR
					33.2231		
75	Iraq	332635	8754	2.63	9	43.67929	IQ
					53.4129		
76	Ireland	33675	1794	5.33	1	-8.24389	IE
					31.0460		
77	Israel	204690	1325	0.65	5	34.85161	IL
					41.8719		
78	Italy	302537	35758	11.82	4	12.56738	IT
					18.1095		
79	Jamaica	5395	76	1.41	8	-77.2975	JM
					36.2048		
80	Japan	80009	1525	1.91	2	138.2529	JP
					30.5851		
81	Jordan	6042	35	0.58	6	36.23841	JO
					48.0195		
82	Kazakhstan	107529	1699	1.58	7	66.92368	KZ
83	Kenya	37348	664	1.78	-0.02356	37.90619	KE
					42.6026		
84	Kosovo	12683	488	3.85	4	20.90298	XK
					29.3116		
85	Kuwait	101299	590	0.58	6	47.48177	KW
					41.2043		
86	Kyrgyzstan	45630	1063	2.33	8	74.7661	KG

					19.8562		
87	Laos	23	0	0	7	102.4955	LA
					56.8796		
88	Latvia	1572	36	2.29	4	24.60319	LV
					33.8547		
89	Lebanon	31792	328	1.03	2	35.86229	LB
90	Lesotho	1507	35	2.32	-29.61	28.23361	LS
					6.42805		
91	Liberia	1337	82	6.13	5	-9.4295	LR
92	Libya	30097	469	1.56	26.3351	17.22833	LY
	Liechtenstein						
93	n	116	1	0.86	47.166	9.555373	LI
					55.1694		
94	Lithuania	3932	87	2.21	4	23.88128	LT
	Luxembourg						
95	g	8090	124	1.53	7	6.129583	LU
					22.1987		
96	Macau	46	0	0	5	113.5439	MO
97	Madagascar	16167	226	1.4	-18.7669	46.86911	MG
98	Malawi	5746	179	3.12	-13.2543	34.30153	MW
					4.21048		
99	Malaysia	10505	133	1.27	4	101.9758	MY
					3.20277		
##	Maldives	9885	34	0.34	8	73.22068	MV
					17.5706		
##	Mali	3034	130	4.28	9	-3.99617	ML
##	Malta	2856	25	0.88	35.9375	14.37542	MT
					21.0078		
##	Mauritania	7425	161	2.17	9	-10.9408	MR
##	Mauritius	367	10	2.72	-20.3484	57.55215	MU
##	Mexico	710049	74949	10.56	23.6345	-102.553	MX
					47.4116		
##	Moldova	48232	1244	2.58	3	28.36988	MD
##	Monaco	199	1	0.5	43.7503	7.412841	MC
##	Mongolia	313	0	0	46.8625	103.8467	MN
					42.7086		
##	Montenegro	9428	151	1.6	8	19.37439	ME
##	Morocco	107743	1918	1.78	31.7917	-7.09262	MA
	Mozambique						
##	e	7262	49	0.67	-18.6657	35.52956	MZ
##	Namibia	10663	117	1.1	-22.9576	18.49041	
					28.3948		
##	Nepal	67804	436	0.64	6	84.12401	NP
					52.1326		
##	Netherlands	105304	6344	6.02	3	5.291266	NL
	New Zealand						
##	Zealand	1827	25	1.37	-40.9006	174.886	NZ
					12.8654		
##	Nicaragua	5073	149	2.94	2	-85.2072	NI
					17.6077		
##	Niger	1193	69	5.78	9	8.081666	NE

					9.08199		
##	Nigeria	57724	1102	1.91	9	8.675277	NG
					60.4720		
##	Norway	13277	267	2.01	2	8.468946	NO
					21.5125		
##	Oman	95339	875	0.92	8	55.92326	OM
					30.3753		
##	Pakistan	308217	6437	2.09	2	69.34512	PK
					8.53798		
##	Panama	107990	2291	2.12	1	-80.7821	PA
##	Papua New Guinea	527	7	1.33	-6.31499	143.9556	PG
##	Paraguay	35571	727	2.04	-23.4425	-58.4438	PY
##	Peru	776546	31568	4.07	-9.18997	-75.0152	PE
					12.8797		
##	Philippines	294591	5091	1.73	2	121.774	PH
					51.9194		
##	Poland	81673	2344	2.87	4	19.14514	PL
					39.3998		
##	Portugal	70465	1928	2.74	7	-8.22445	PT
					25.3548		
##	Qatar	124175	212	0.17	3	51.18388	QA
					45.9431		
##	Romania	116415	4550	3.91	6	24.96676	RO
					61.5240		
##	Russia	1117487	19720	1.76	1	105.3188	RU
##	Rwanda	4779	27	0.56	-1.94028	29.87389	RW
##	Saint Kitts and Nevis	19	0	0	2	-62.783	KN
					17.3578		
##	Saint Lucia	27	0	0	4	-60.9789	LC
					13.9094		
##	Saint Vincent and the Grenadines	64	0	0	1	-61.2872	VC
					12.9843		
##	San Marino	723	42	5.81	6	12.45778	SM
					43.9423		
##	Saudi Arabia	331359	4569	1.38	4	45.07916	SA
##	Senegal	14795	303	2.05	14.4974	-14.4524	SN
					44.0165		
##	Serbia	33080	744	2.25	2	21.00586	RS
##	Seychelles	143	0	0	-4.67957	55.49198	SC
					8.46055		
##	Sierra Leone	2183	72	3.3	5	-11.7799	SL
					1.35208		
##	Singapore	57639	27	0.05	3	103.8198	SG
					48.6690		
##	Slovakia	7269	41	0.56	3	19.69902	SK
					46.1512		
##	Slovenia	4694	143	3.05	4	14.99546	SI
					5.15214		
##	Somalia	3465	98	2.83	9	46.19962	SO

##	South Africa	665188	16206	2.44	-30.5595	22.93751	ZA
##	South Korea	23341	393	1.68	35.9077	6	127.7669 KR
##	Spain	693556	31034	4.47	40.4636	7	-3.74922 ES
##	Sri Lanka	3324	13	0.39	7.87305	4	80.7718 LK
##	Sudan	13578	836	6.16	12.8628	1	30.21764 SD
##	Suriname	4779	101	2.11	3.91930	5	-56.0278 SR
##	Sweden	89756	5876	6.55	60.1281	6	18.6435 SE
##	Switzerland	51101	2060	4.03	46.8181	9	8.227512 CH
##	Syria	3924	181	4.61	34.8020	8	38.99682 SY
##	Taiwan	509	7	1.38	23.6978	1	120.9605 TW
##	Tajikistan	9475	74	0.78	38.8610	3	71.27609 TJ
##	Tanzania	509	21	4.13	-6.36903	34.88882	TZ
##	Thailand	3516	59	1.68	15.8700	3	100.9925 TH
##	Timor-Leste	27	0	0	-8.87422	125.7275	TL
##	Togo	1701	41	2.41	8.61954	3	0.824782 TG
##	Trinidad and Tobago	4136	67	1.62	10.6918	-61.2225	TT
##	Tunisia	12479	174	1.39	33.8869	2	9.537499 TN
##	Turkey	308069	7711	2.5	38.9637	5	35.24332 TR
##	Uganda	6879	69	1	1.37333	3	32.29028 UG
##	Ukraine	189488	3784	2	48.3794	3	31.16558 UA
##	United Arab Emirates	87530	406	0.46	23.4240	8	53.84782 AE
##	United States	6933548	20188	2.91	37.0902	4	-95.7129 US
##	Uruguay	1946	47	2.42	-32.5228	-55.7658	UY
##	Uzbekistan	53275	444	0.83	41.3774	9	64.58526 UZ
##	Venezuela	69439	574	0.83	6.42375	-66.5897	VE
##	Vietnam	1069	35	3.27	14.0583	2	108.2772 VN
##	Western Sahara	10	1	10	24.2155	3	-12.8858 EH
##	Yemen	2029	586	28.88	15.5527	3	48.51639 YE
##	Zambia	14443	332	2.3	-13.1339	27.84933	ZM

##	Zimbabwe	7725	227	2.94	-19.0154	29.15486	ZW
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Table-4: Morbidity and mortality rates of COVID-19 effected countries.

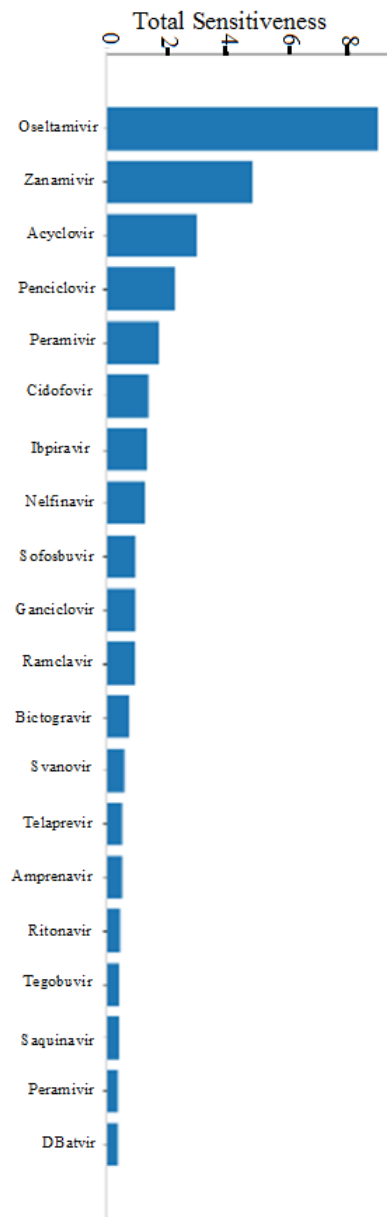
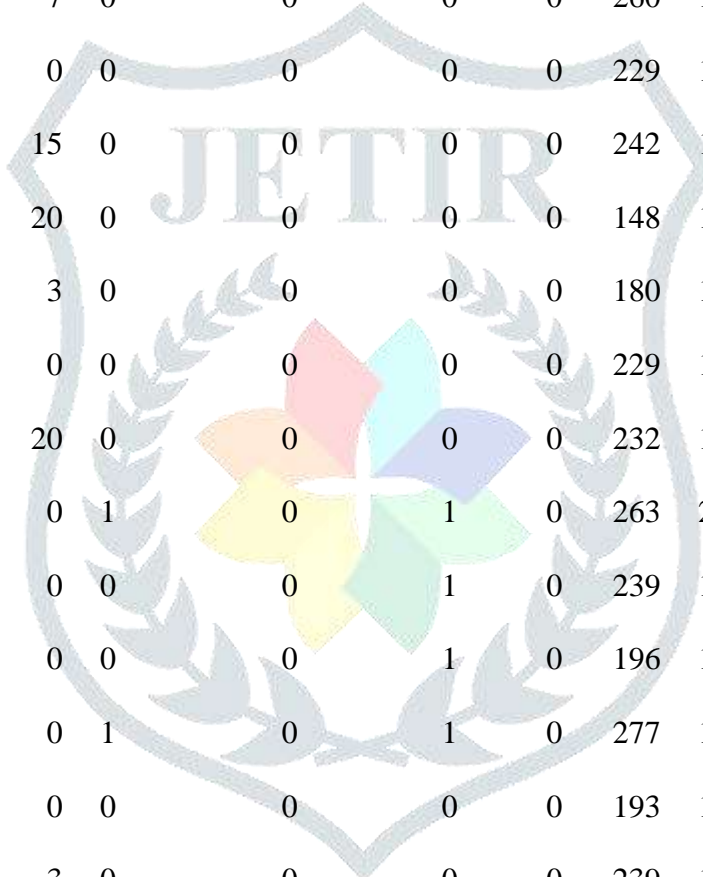


Figure-2: Worldwide antivirals as choice of drugs sequence against COVID-19.

The COVID-19 is associated with two vital risk factors- Cardiovascular and another is metabolic disorders sick to be the comorbid conditions. So, investigations were stressed on validating various parameters like BP (systolic & diastolic), heart rate, BMI, behavior like smoking, diet, glucose level. Also, the investigation of prevalence of hypertension and extreme to stroke are assembled as per patient’s demography, in **Table -5**. More than 500 patients are taken in consideration with all above parameters.

id	age	education	sex	smoking	cigsPer Day	B P	prevalentStroke	prevalentHyp	diabetes	totChol	sys BP	dia BP	B MI	heartRate	glucose
33	4												24.		
90	3	2	M	YES	35	0	0	0	0	207	117	65	42	60	100
33	5											82.	28.		
91	6	3	F	NO	0	0	0	0	0	192	122	5	61	68	58
33	5												25.		
92	8	1	F	YES	20	0	0	1	0	260	180	100	56	100	
33	4												23.		
93	7	3	F	NO	0	0	0	0	0	231	103	66	4	70	78
33	4												25.		
94	4	1	M	NO	0	0	0	0	0	160	119	87	81	54	
33	4												22.		
95	1	2	F	YES	7	0	0	0	0	260	101	68	49	80	77
33	5												25.		
96	9	1	M	NO	0	0	0	0	0	229	101	66	18	44	81
33	4												19.		
97	1	1	F	YES	15	0	0	0	0	242	139	80	68	72	60
33	3												24.		
98	9	3	M	YES	20	0	0	0	0	148	101	62	47	70	81
33	3												24.		
99	8	2	F	YES	3	0	0	0	0	180	115	86	91	70	
34	4												27.		
00	6	2	F	NO	0	0	0	0	0	229	125	80	27	66	80
34	3												24.		
01	7	2	M	YES	20	0	0	0	0	232	129	74	46	86	88
34	6												30.		
02	7	1	F	NO	0	1	0	1	0	263	201	93	04	75	78
34	6												28.		
03	1	1	M	NO	0	0	0	1	0	239	122	83	85	62	94
34	6												25.		
04	4	3	F	NO	0	0	0	1	0	196	150	84	98	60	93
34	4												39.		
05	7	1	F	NO	0	1	0	1	0	277	139	99	64	85	81
34	6												27.		
06	2	2	M	NO	0	0	0	0	0	193	133	80	2	70	78
34	4												26.		
07	4	2	F	YES	3	0	0	0	0	239	103	67	58	66	73
34	4												17.		
08	2	1	M	YES	35	0	0	0	0	218	116	86	81	85	69
34	6												27.		
09	3	1	F	NO	0	0	0	1	0	306	195	105	96	75	87
34	5												24.		
10	3	2	M	NO	0	0	0	0	1	234	113	68	8	76	108
34	5												22.		
11	6	1	F	YES	15	0	0	0	0	269	121	75	36	50	66
34	5												25.		
12	3	1	F	YES	20	0	0	0	0	222	123	82	52	72	67
34	3												17.		
13	9	4	F	YES	9	0	0	0	0	180	113	73	65	70	73
34	4												24.		
14	3	1	M	YES	30	0	0	0	0	252	112	78	25	90	65



34	6												22.		
15	4	1	F	NO	0	0	0	0	0	295	127	78	89	67	73
34	6												29.		
16	3	4	F	NO	0	0	0	0	0	248	165	76	35	70	
34	5												26.		
17	1	1	M	YES	20	0	0	0	0		113	74	37	70	
34	5												29.		
18	2	1	M	YES	25	0	0	1	0	206	173	117	63	75	77
34	6												16.		
19	4	2	M	NO	0	0	0	0	0	193	114	79	59	75	64
34	5											87.	31.		
20	6	1	M	YES	43	0	0	1	0	240	129	5	5	80	
34	5												28.		
21	3	2	F	YES	30	0	0	0	0	250	150	95	02	68	
34	4												23.		
22	2	2	F	YES	20	0	0	0	0	200	95	55	68	60	83
34	5												22.		
23	0	1	M	YES	20	0	0	0	0	259	108	81	81	80	72
34	4												26.		
24	8	1	F	YES	10	0	0	0	0	195	121	78	27	75	80
34	6												29.		
25	4	1	M	NO	0	0	0	1	0	217	147	87	73	77	
34	5												18.		
26	5	1	F	YES	1	0	0	0	0	240	108	70	06	71	140
34	4												22.		
27	9	2	F	YES	9	0	0	0	0	226	106	71	89	85	57
34	6												28.		
28	3	1	F	NO	0	0	0	1	0	242	143	85	25	75	73
34	5												29.		
29	1	4	M	YES	10	0	0	0	0	185	125	85	43	56	72
34	6												26.		
30	4	1	F	NO	0	0	0	1	0	372	169	85	01	75	79
34	6												27.		
31	6	2	M	NO	0	0	0	0	1	189	140	71	56	70	119
34	5												22.		
32	4	1	M	YES	20	0	0	1	0	255	142	93	17	75	118
34	4												24.		
33	0	2	F	NO	0	0	0	0	0	290	122	85	06	87	70
34	5												39.		
34	3	3	F	NO	0	0	0	1	0	156	142	95	6	80	
34	4												25.		
35	1	1	F	NO	0	0	0	0	0	179	111	79	87	85	82
34	5											87.	22.		
36	8	1	F	NO	0	0	0	0	0	218	139	5	91	73	
34	5												23.		
37	0	4	F	NO	0	0	0	0	0	261	129	80	06	85	90
34	3												22.		
38	7	2	M	NO	0	0	0	0	0	218	130	89	7	77	88
34	5												23.		
39	5	1	F	NO	0	0	0	1	0	200	141	92	48	65	84
34	4												25.		
40	8	3	F	NO	0	0	0	0	0	193	127	81	85	58	70

34	4												23.		
41	0	2	F	YES	43	0	0	0	0	224	106	72	59	82	71
34	4												21.		
42	2	3	F	YES	15	0	0	0	0	216	120	70	93	88	88
34	4												31.		
43	9	3	F	NO	0	0	0	0	0	278	131	93	4	80	66
34	3												19.		
44	3	1	F	NO	0	0	0	0	0	158	108	67	84	86	69
34	4												26.		
45	5	4	M	YES	3	0	0	1	0	218	145	90	65	76	70
34	4												88.	23.	
46	7	1	M	NO	0	0	0	0	0	265	138	5	75	83	90
34	4												31.		
47	5	4	F	NO	0	0	0	1	0	252	160	105	72	65	83
34	4												27.		
48	1	2	F	YES	16	0	0	1	0	243	159	100	78	78	71
34	5												27.		
49	0	1	F	NO	0	0	0	0	0	273	131	93	61	80	94
34	5												22.		
50	1	4	M	NO	0	0	0	0	0	154	98	66	86	63	82
34	6												30.		
51	2	1	F	NO	0	0	0	0	0	242	137	75	51	60	78
34	5												43.		
52	3	1	F	NO	0	0	0	1	1	248	200	140	3	107	130
34	4												25.		
53	5	2	F	NO	0	0	0	1	0	215	153	82	92	100	75
34	4												28.		
54	2	1	M	NO	0	0	0	0	0	214	120	81	47	78	77
34	5												26.		
55	7	1	M	NO	0	0	0	0	0	220	136	84	84	75	64

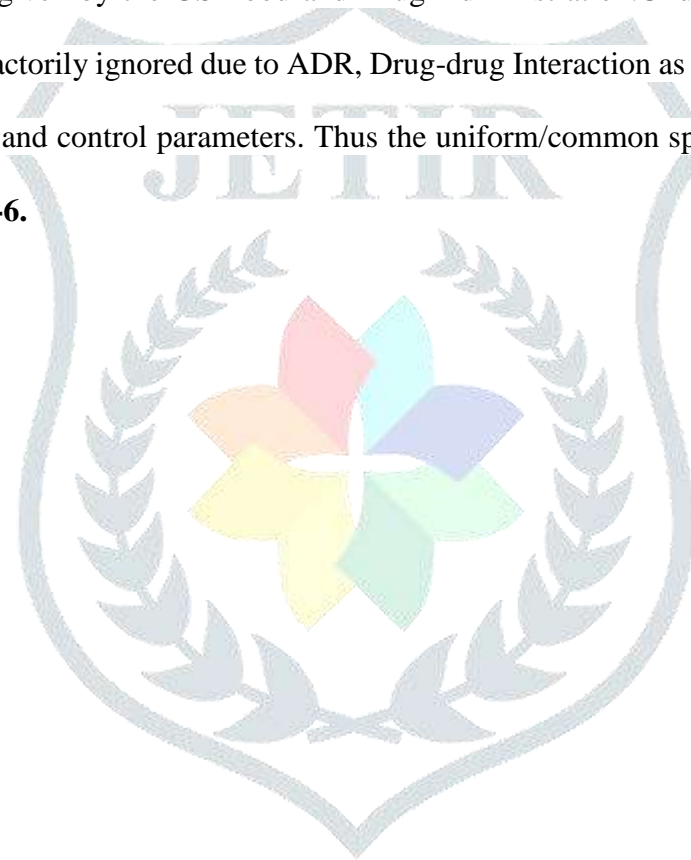
Table-5: Cardiovascular disorders viabilities along with their lifestyle as per demography.

The Union Ministry of Health is still not happy with the effectiveness of Remdesivir and Favipiravir, two antiviral drugs, in the treatment of 19 Covid patients. Recently, a joint evaluation group (technical committee) at the Ministry of Health held a meeting to discuss the effectiveness of these two antiviral drugs in patients with coronavirus. Experts from ICMR, NCDC, DCGI, WHO representatives, AIIMS, DGHS, the Ministry of Animal Husbandry, among others, were included at the high-level conference. "The technical committee has not found these two antiviral drugs fit for the usage in the covid-19 treatment because there is no concrete evidence to determine the efficacy of the drugs."

"Till the time, we only recommend hydroxychloroquine (HCQ) as prophylaxis of COVID in selected individuals. It includes asymptomatic healthcare workers involved in the care of suspected or confirmed cases of COVID, asymptomatic household contacts of laboratory

confirmed cases, a combination of HCQ with Azithromycin on patients with severe disease and requiring ICU management,"

The respectable said, including that HCQ must be issued best as in keeping with authorities suggestions at the prescription of a licenced scientific practitioner. Glenmark is the primary employer in India to start section three scientific trials for COVID-19 sufferers with Favipiravir in India following approval through the country's pinnacle drug regulator. An emergency use authorization for the investigational medicine remdesivir for the treatment of suspected or laboratory-confirmed Covid-19 in adults and kids hospitalised with serious malady was given by the US Food and Drug Administration. Under defined table shows the selected antivirus unsatisfactorily ignored due to ADR, Drug-drug Interaction as advised from clinical trials, different dosing regimens and control parameters. Thus the uniform/common special therapeutic outcomes are not enlightened **Table-6.**



Drug Name	Dosing Regimens <i>The doses listed here are for approved indications or from reported experiences or clinical trials.</i>	Adverse Effects	Monitoring Parameters	Drug-Drug Interaction Potential	Panel's Recommendations, Comments, and Links to Clinical Trials
Chloroquine	<p>Dose Previously Suggested in an EUA for Adults and Adolescents Weighing ≥250 kg:</p> <ul style="list-style-type: none"> CQ 1 g PO once on Day 1, then CQ 500 mg PO once daily for 4–7 days of total treatment. Treatment duration should be based on clinical evaluation. 	<ul style="list-style-type: none"> Prolonged QTc interval, Torsades de Pointes, AV block, ventricular arrhythmia Gastrointestinal effects (e.g., nausea, vomiting, diarrhea) Hepatitis Hypoglycemia Hemolysis (especially in patients with G6PD deficiency) Myopathy Rash Given the risk of Given the risk of heart rhythm problems, the FDA cautions against using CQ to treat COVID-19 outside of a hospital or a clinical trial.¹ 	<ul style="list-style-type: none"> CBC, hepatic panel, blood glucose, SCr, potassium, magnesium Baseline ECG Follow-up ECG if CQ is given with QTc-prolonging drugs or if the patient has underlying cardiac disease 	<ul style="list-style-type: none"> Additive effect with other drugs that prolong the QTc interval (including AZM) or that cause hypoglycemia CYP2D6 inhibitor (moderate) P-gp inhibitor 	<ul style="list-style-type: none"> The Panel recommends against the use of CQ with or without AZM for the treatment of COVID-19 in hospitalized patients (AI). In nonhospitalized patients, the Panel recommends against the use of CQ with or without AZM for the treatment of COVID-19, except in a clinical trial (AI). The Panel recommends against using high dose CQ (600 mg twice daily for 10 days) for the treatment of COVID-19 (AI). Dose-dependent toxicity A list of clinical trials is available here: Chloroquine
Hydroxychloroquine	<p>Adults:</p> <ul style="list-style-type: none"> Various loading and maintenance doses have been reported in studies or in clinical care. <p>Dose Previously Suggested in an EUA for Hospitalized Adults and Adolescents Weighing ≥250 kg:</p> <ul style="list-style-type: none"> HCQ 800 mg PO once on Day 1, then HCQ 400 mg PO once daily for 4–7 days of total treatment. Treatment duration should be based on clinical evaluation. 	<ul style="list-style-type: none"> Prolonged QTc interval, Torsades de Pointes, AV block, ventricular arrhythmia Gastrointestinal effects (e.g., nausea, vomiting, diarrhea) Hepatitis Hypoglycemia Myopathy Anxiety, agitation, hallucinations, psychosis Allergic reaction/rash Given the risk of heart rhythm problems, the FDA cautions against using HCQ for to treat COVID-19 	<ul style="list-style-type: none"> CBC, hepatic panel, blood glucose, SCr, potassium, magnesium Baseline ECG Follow-up ECG if HCQ is given with QTc-prolonging drugs (e.g., AZM) or if the patient has underlying cardiac disease 	<ul style="list-style-type: none"> Additive effect with other drugs that prolong the QTc interval (including AZM) or that cause hypoglycemia CYP2D6 inhibitor (moderate) P-gp inhibitor 	<ul style="list-style-type: none"> The Panel recommends against the use of HCQ with or without AZM for the treatment of COVID-19 in hospitalized patients (AI). In nonhospitalized patients, the Panel recommends against the use of HCQ with or without AZM for the treatment of COVID-19, except in a clinical trial (AI). Long elimination; half-life is 40–55 days. Dose-dependent toxicity

Table-6: Adverse Drug reaction, Drug-drug Interaction and monitoring parameters associated with drug dosing regimens.

4. CONCLUSION

On collecting COVID-19 information's from various countries and various resources, hence opens no exclusion criteria's on observation studies. It was observed that patient's condition before taking medicines and after medicines are showing complex situations as health concern in different ways in COVID-19 patients. Even the complications might have seen in various cases after medications. There is no prophylactic treatments with any vaccines so the treatment has to be satisfied with antiviral and sometimes steroids involvement to counteract world pandemic risks. Antivirals are deliberately used globally in many countries especially in India and in other side because of its versatile profile the exact potential efficacy was not clear. Hence, no specification of therapeutic drugs could be open into flash. Thus, the treatment with antiviral drugs was not satisfactory for COVID-19. Therefore, vaccines are the alternative as acquired immunity support.

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REFERENCE



1. Li Q, Med M, Guan X, Wu P, Wang X, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *N Engl J Med*. 2020; 382: 1199–1207.
2. Garg S, Kim L, Whitaker M, O'Halloran A, Cummings C, et al. Hospitalization rates and characteristics of patients hospitalized with laboratory-confirmed coronavirus disease 2019 — COVID-NET. Centers for Disease Control and Prevention: *MMWR*. 2020; 69(15):458–464.
3. Sanders JM, Monogue ML, Jodlowski TZ, Cutrell JB. Pharmacologic treatments for coronavirus disease 2019 (COVID-19): a review. *JAMA*. 2020; 323(18): 1824-1836.

4. Siddiqi HK, Mehra MR. COVID-19 illness in native and immunosuppressed states: a clinical-therapeutic staging proposal. *J Heart Lung Transplant*. 2020; 39(5): 405-407.
5. Tan Q, Duan L, Ma Y, Wu F, Huang Q, Mao K, et al. A Review of Its Discovery and Development Leading to Emergency Use Authorization for Treatment of COVID-19. *ACS Central Sc.*, 2020; 17(3): 22-29.
6. Cao Y, Deng Q, Dai S . Remdesivir for severe acute respiratory syndrome coronavirus 2 causing COVID-19 : An evaluation of the evidence. *Travel Med Infect Dis*. 2020; 35:101647.
7. Chen J, Lin S, Niu C, Xiao Q. Clinical evaluation of Shufeng Jiedu Capsules combined with umifenovir (Arbidol) in the treatment of common-type COVID-19 : a retrospective study. *Expert Rev Respir Med*. 2020; 35 :1–9.
8. Zhu H, Sze N, Mak A, Yan Y, Zhu Y. Novel coronavirus treatment with ribavirin : Groundwork for an evaluation concerning COVID - 19. 2020; 14:740–746.
9. Giri A, Das A, Sarkar AK, Giri AK. Mutagenic , Genotoxic and Immunomodulatory effects of Hydroxychloroquine and Chloroquine : a review to evaluate its potential to use as a prophylactic drug against COVID-19. 2020; 4(6): 1–14.
10. Xie G, Ding F, Han L, Yin D, Lu H, Zhang M. The role of peripheral blood eosinophil counts in COVID-19 patients. 2020; 12(4):1–12.
11. Sharifipour E, Shams S, Esmkhani M, Khodadadi J, Fotouhi-Ardakani R, Koohpaei A et al. Evaluation of bacterial co-infections of the respiratory tract in COVID-19 patients admitted to ICU. *BMC Infectious Diseases*. 2020; 20(1): 646-652.
12. Li D, Liu C, Liu J, Hu J, Yang Y, Zhou Y. Analysis of Risk Factors for 24 Patients With COVID-19 Developing From Moderate to Severe Condition. *Front. Cell. Infect. Microb.*,2020;10:1–7.
13. Mak G, Cheng P, Lau S, Wong K, Lau C, Lam E et al. Evaluation of rapid antigen test for detection of SARS-CoV-2 virus. *Journal of Clinical Virology*. 2020; 129:104500.
14. Hu B, Guo H, Zhou P, Shi ZL. Characteristics of SARS-CoV-2 and COVID-19. *Nat Rev Microbiol*, 2020. 12(1): 1-14.

15. Yuan S, Chan CC, Chik KK, Tsang JO, Liang R, Cao J, et al. Broad-Spectrum Host-Based Antivirals Targeting the Interferon and Lipogenesis Pathways as Potential Treatment Options for the Pandemic Coronavirus. 2020; 2:1–16.
16. Irie K, Nakagawa A, Fujita H, Tamura R, Eto M, Ikesue H, et al. Pharmacokinetics of Favipiravir in Critically Ill Patients With COVID-19. 2020; 880–885.
17. Varchetta S, Mele D, Oliviero B, Mantovani S, Ludovisi S, Cerino A, et al. Unique immunological profile in patients with COVID-19. Cell Mol Immunol, 2020; 1-9

