# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health & Indigenous Medical Services


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## Vaccine trials on COVID 19 Part II

### 3. Trials conducted up to now

By understanding the importance of the vaccine, several institutions and developers around the world have started researches on developing a vaccine. Those include the most of the recognized universities in the world such as the Jenner institute of the University of Oxford, University of Cambridge, University of Queensland, University of Pittsburgh, University of Tokyo and the University of By understanding the importance of the vaccine, several institutions and developers around the world have started researches on developing a vaccine. Those include the most of the recognized universities in the world such as the Jenner institute of the University of Oxford, University of Cambridge, University of Queensland, University of Pittsburgh, University of Tokyo and the University of Hong Kong.

By the 3rd of May 2020, hundred and eleven trials were known to be in progress to develop a vaccine for COVID-19(COVID-19 Treatment and Vaccine Tracker). Among them, only eight has been proceeded up to clinical trial stages. (Milken Institute, 2020)

Hong Kong.

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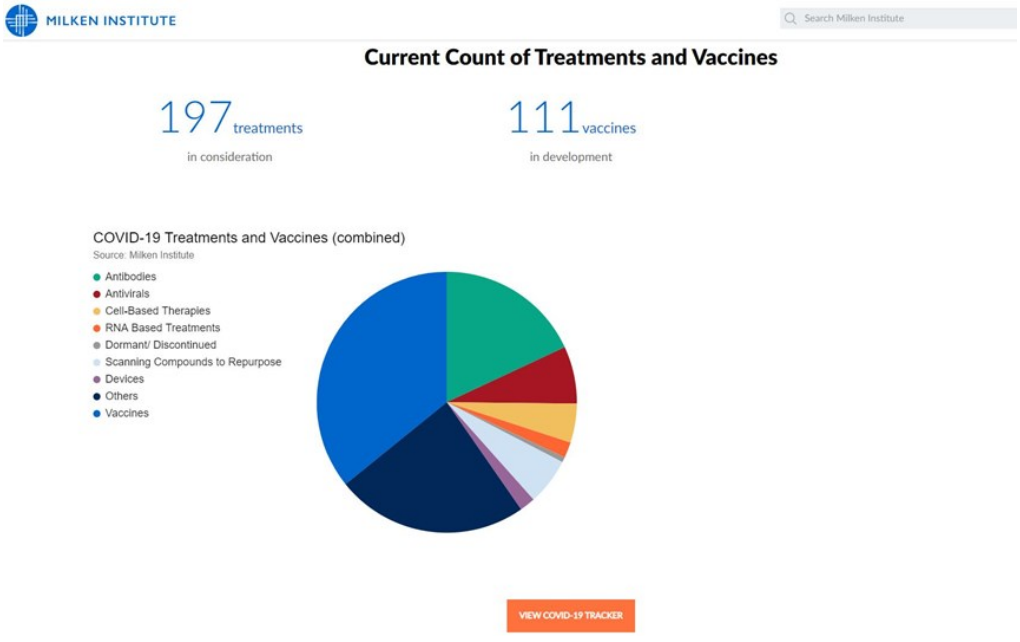


**Contents** **Page**

| Developer | Type of vaccine | Details of the clinical trial | Expected time to finish the clinical trial. |
|---|---|---|---|
| Inovio Pharmaceuticals/Beijing Ad vaccine Biotechnology | DNA plasmid; INO-4800 | Non-randomized control trial with 40 healthy volunteers of 18-50 years | November 2020 |
| Sinovac/Dynavax | Inactivated (inactivated + CpG 1018) | Phase 1 clinical trial. | |
| Beijing Institute of Biological Products/ Wuhan Institute of Biological Products | Inactivated | A randomized, double-blind, placebo parallel-controlled phase I/II clinical trial, Healthy individuals of 6 years and above | November 2021 |
| Jenner Institute, University of Oxford | Non replicating viral vector-ChAd0x1 | A randomized single-blinded, phase I/II, multi-center study with 1112 participants | May 2021 |
| CanSino Biologics/ Beijing Institute of Biotechnology | Recombinant Novel Coronavirus Vaccine (Adenovirus Type 5 Vector) | Non-randomized, single-center, open el label, dose-escalating phase 1 clinical trial with 108 participants. | December 2022 |
| Moderna/NIAID | mRNA-1273 | phase I, Non-Randomized open-label, dose-ranging clinical trial 45 participants | June 2021 |
| Shenzhen Geno-Immune Medical Institute | LV-SMENP-DC Dendritic cells modified with a lentiviral vector expressing synthetic minigene based on domains of selected viral proteins; administered with antigen-specific cytotoxic T lymphocytes | Phase I/II Multicenter Trial Without masking 100 participants | December 2024 |
| Shenzhen Geno-Immune Medical Institute | Artificial antigen-presenting cells modified with a lentiviral vector expressing synthetic minigene based on domains of selected viral proteins | Phase 1 study, Single Group Assignment without masking 100 participants | December 2024 |

However, S protein subunit was not used by the researchers who has proceeded their trials up to clinical stages, but among the vaccines in pre-clinical development, the majority were based on the protein subunits such as S proteins and RNA. There were few inactivated, live attenuated and DNA vaccines as well as replicating and non-replicating viral vector-based vaccines.

Furthermore, it would be beneficial to develop a vaccine for COVID-19 as it is a devastating disease with relatively high mortality and infectivity. But currently, the world is experiencing a pandemic which is assumed to be settled with developing herd immunity. By that time, the demand for a vaccine will be less (Dhama et al., 2020). Also, the immunological status to the infection within the population may vary during the pandemic, make it difficult to find suitable study participants. However, it is very important to consider the common characteristics of the family *Coronaviridae* as they can make such outbreaks in the future too. Already available influenza and BCG vaccines can also be considered in prevention of COVID-19. More importantly, as the expected time to finish the clinical trial is not in the near future, everyone should strictly adhere to the other preventive measures such as social distancing and maintaining personal hygiene.

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**Table 1: Selected notifiable diseases reported by Medical Officers of Health 18th– 24th April 2020 (17th Week)**

| RDHS Division | Dengue Fever | | Dysentery | | Encephalitis | | Enteric Fever | | Food Poisoning | | Leptospirosis | | Typhus Fever | | Viral Hepatitis | | Human Rabies | | Chickenpox | | Meningitis | | Leishmaniasis | | WRCD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | T* | C** |
| Colombo | 8 | 2712 | 0 | 13 | 0 | 4 | 0 | 4 | 0 | 14 | 0 | 62 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 153 | 0 | 16 | 0 | 0 | **60** | **94** |
| Gampaha | 5 | 1611 | 1 | 5 | 0 | 0 | 0 | 4 | 0 | 19 | 6 | 44 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 191 | 0 | 8 | 0 | 17 | **52** | **83** |
| Kalutara | 13 | 964 | 0 | 5 | 0 | 4 | 0 | 3 | 0 | 1 | 3 | 121 | 0 | 8 | 0 | 1 | 0 | 0 | 3 | 160 | 0 | 9 | 0 | 0 | **55** | **89** |
| Kandy | 14 | 1114 | 1 | 8 | 0 | 1 | 0 | 7 | 1 | 7 | 6 | 23 | 1 | 40 | 0 | 3 | 0 | 0 | 2 | 103 | 0 | 14 | 0 | 25 | **62** | **98** |
| Matale | 4 | 439 | 0 | 3 | 0 | 2 | 0 | 1 | 0 | 4 | 3 | 20 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 34 | 0 | 1 | 3 | 128 | **61** | **100** |
| NuwaraEliya | 1 | 130 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 3 | 43 | 0 | 2 | 0 | 0 | 3 | 49 | 0 | 7 | 0 | 0 | **25** | **99** |
| Galle | 7 | 949 | 2 | 13 | 0 | 8 | 0 | 2 | 0 | 12 | 12 | 171 | 0 | 21 | 0 | 1 | 0 | 0 | 1 | 190 | 2 | 17 | 0 | 2 | **60** | **76** |
| Hambantota | 0 | 259 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 37 | 0 | 53 | 0 | 14 | 0 | 2 | 0 | 0 | 0 | 104 | 0 | 8 | 0 | 231 | **72** | **87** |
| Matara | 0 | 351 | 0 | 7 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 81 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 68 | 0 | 5 | 0 | 117 | **49** | **57** |
| Jaffna | 9 | 1743 | 3 | 40 | 0 | 0 | 0 | 16 | 0 | 16 | 0 | 10 | 3 | 438 | 0 | 0 | 0 | 1 | 3 | 71 | 0 | 6 | 0 | 0 | **34** | **93** |
| Kilinochchi | 0 | 104 | 1 | 20 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 6 | 0 | 18 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 4 | 0 | 4 | **69** | **100** |
| Mannar | 0 | 117 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | **41** | **93** |
| Vavuniya | 1 | 231 | 0 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 32 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 20 | 1 | 4 | 0 | 1 | **60** | **100** |
| Mullaitivu | 0 | 62 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 10 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 5 | **41** | **75** |
| Batticaloa | 17 | 2046 | 0 | 38 | 0 | 2 | 0 | 0 | 1 | 5 | 0 | 13 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 69 | 0 | 9 | 0 | 1 | **58** | **98** |
| Ampara | 0 | 282 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 30 | 0 | 0 | 0 | 1 | 0 | 0 | 11 | 78 | 0 | 10 | 0 | 4 | **63** | **100** |
| Trincomalee | 3 | 2151 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 12 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 5 | 0 | 0 | **47** | **92** |
| Kurunegala | 0 | 648 | 0 | 5 | 0 | 4 | 0 | 2 | 0 | 29 | 0 | 54 | 0 | 10 | 0 | 1 | 0 | 0 | 7 | 234 | 0 | 8 | 0 | 153 | **56** | **84** |
| Puttalam | 2 | 339 | 0 | 6 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 16 | 0 | 9 | 0 | 0 | 0 | 1 | 0 | 58 | 1 | 17 | 0 | 2 | **63** | **93** |
| Anuradhapur | 3 | 311 | 1 | 9 | 0 | 1 | 0 | 2 | 0 | 19 | 0 | 115 | 0 | 12 | 0 | 1 | 0 | 1 | 6 | 104 | 1 | 17 | 0 | 81 | **55** | **82** |
| Polonnaruwa | 0 | 183 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 12 | 0 | 1 | 0 | 70 | 0 | 8 | 0 | 95 | **66** | **94** |
| Badulla | 4 | 363 | 0 | 8 | 0 | 2 | 0 | 2 | 0 | 3 | 9 | 115 | 2 | 22 | 0 | 6 | 0 | 0 | 3 | 104 | 1 | 16 | 0 | 4 | **58** | **100** |
| Monaragala | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Ratnapura | 3 | 586 | 1 | 30 | 0 | 11 | 0 | 1 | 1 | 14 | 8 | 281 | 1 | 10 | 0 | 10 | 0 | 0 | 2 | 108 | 0 | 35 | 0 | 38 | **52** | **89** |
| Kegalle | 5 | 362 | 0 | 5 | 0 | 3 | 0 | 1 | 0 | 12 | 1 | 69 | 1 | 17 | 0 | 5 | 0 | 0 | 4 | 112 | 0 | 11 | 0 | 9 | **59** | **96** |
| Kalmune | 10 | 827 | 0 | 25 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 37 | 204 | 3 | 15 | 0 | 0 | **74** | **100** |
| **SRILANKA** | **109** | **18884** | **10** | **280** | **0** | **49** | **0** | **59** | **3** | **196** | **56** | **1417** | **11** | **678** | **1** | **59** | **0** | **7** | **89** | **2359** | **9** | **253** | **3** | **917** | **56** | **87** |

**Source: Weekly Returns of Communicable Diseases (WRCD).**

*T=Timeliness refers to returns received on or before 24th April , 2020 Total number of reporting units 356 Number of reporting units data provided for the current week: 255 **C****-Completeness

**A** = Cases reported during the current week. **B** = Cumulative cases for the year.

## Table 2: Vaccine-Preventable Diseases & AFP

18th– 24th April 2020 (17th Week)

| Disease | No. of Cases by Province | | | | | | | | | Number of cases during current week in 2020 | Number of cases during same week in 2019 | Total number of cases to date in 2020 | Total number of cases to date in 2019 | Difference between the number of cases to date in 2020 & 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | C | S | N | E | NW | NC | U | Sab | | | | | |
| AFP* | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 09 | 31 | - 70 % |
| Diphtheria | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| Mumps | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 01 | 05 | 56 | 125 | - 55.2 % |
| Measles | 00 | 00 | 00 | 00 | 01 | 00 | 00 | 00 | 00 | 01 | 02 | 25 | 66 | - 92 % |
| Rubella | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| CRS** | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| Tetanus | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 03 | 04 | 0 % |
| Neonatal Tetanus | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| Japanese Encephalitis | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 06 | 08 | - 14 % |
| Whooping Cough | 00 | 00 | 00 | 00 | 01 | 00 | 00 | 00 | 00 | 00 | 01 | 03 | 26 | - 88.4 % |
| Tuberculosis | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 164 | 1455 | 2685 | - 45.8 % |

### Key to Table 1 & 2

**Provinces:** **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

**RDHS Divisions:** **CB**: Colombo, **GM**: Gampaha, **KL**: Kalutara, **KD**: Kandy, **ML**: Matale, **NE**: Nuwara Eliya, **GL**: Galle, **HB**: Hambantota, **MT**: Matara, **JF**: Jaffna, **KN**: Killinochchi, **MN**: Mannar, **VA**: Vavuniya, **MU**: Mullaitivu, **BT**: Batticaloa, **AM**: Ampara, **TR**: Trincomalee, **KM**: Kalmunai, **KR**: Kurunegala, **PU**: Puttalam, **AP**: Anuradhapura, **PO**: Polonnaruwa, **BD**: Badulla, **MO**: Moneragala, **RP**: Ratnapura, **KG**: Kegalle.

**Data Sources:**

**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

**Special Surveillance: AFP*** (Acute Flaccid Paralysis ), Japanese Encephalitis

**CRS** =**Congenital Rubella Syndrome

**NA** = Not Available

**Number of Malaria Cases Up to End of April 2020,**

# 01

**All are Imported!!!**

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to **chepid@sltnet.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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