THE DIFFERENCE IS IN THE DATA®

Case Study

# Independent Data Monitoring Committees (IDMCs)

**IDMC support for a study assessing a novel therapeutic for severe COVID-19**

The Biostatistics Services team support statistics and programming activities involved in Independent Data Monitoring Committee (IDMC) planning and execution. This can involve working within an IDMC or as part of an Independent Statistics and Programming Team (ISPT). With extensive statistical IDMC and ISPT experience, MMS can provide the infrastructure for confidential data, clarity of communication and flexibility you need to support oversight of clinical studies.

## The Challenge

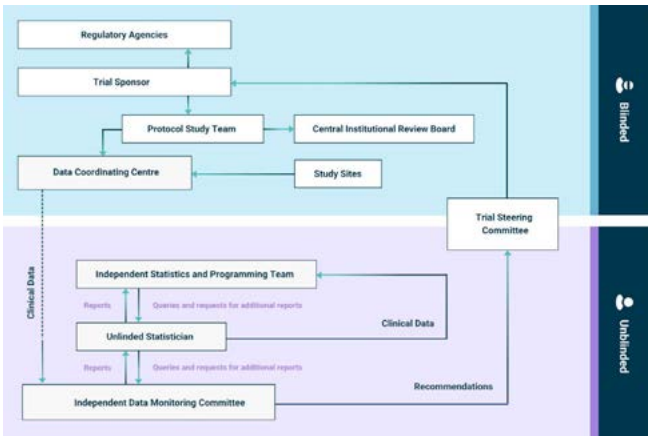
A large pharmaceutical company was investigating a novel treatment in patients with severe COVID-related disease. The size and complexity of the study required an independent data monitoring committee (IDMC) to ensure the integrity of the clinical trial from initiation to completion.

## The Approach

MMS followed current regulatory guidance (1, 2, 3) and functioned as the unblinded external statistical and programming team supporting the IDMC (as shown in Figure 1) throughout the two-part study.

**A total of 19 IDMC meetings were required to:**

- review safety data
- assess efficacy for futility or early stopping at prespecified times using a mixture of Bayesian and frequentist stopping rules



### Set-up Phase

The set-up phase involved creating firewalled areas and a secure portal within Egnyte with restricted access to named unblinded individuals for all confidential communications and data. Egnyte is MMS chosen platform for secure and compliant file sharing and collaboration. It provides full functionality required to support IDMCs for collaboration, security and user management.

The MMS Biostatistics team rapidly familiarised themselves with the study design, IDMC requirements and the technical aspects of the futility and efficacy stopping rules. They then performed a dry run with blinded data to ensure programs and automated QC processes were functioning and that the outputs were aligned with the sponsor's requirements.

### Interim analyses

Each interim analysis had an extremely expedited timeline with a 24-hour turnaround from data receipt to upload of files for IDMC review. The Biostatistics team:

- received dirty data from an ongoing open database and provided feedback on data issues
- ran production code to create datasets and critical safety and efficacy outputs, before conducting QC process to ensure quality
- uploaded output to Egnyte and ensured the IDMC could access the files

## The Results

MMS' lead statistician attended the open and closed sessions of the IDMC, presented results (including explaining the complex Bayesian decision rules to clinical colleagues) and took minutes for the closed sessions. Between meetings the Biostatistics team addressed any queries from the IDMC regarding output content and format and added new outputs when requested. On study completion the team archived all communications, data, code, log and output files from every IDMC and provided all information to the sponsor.

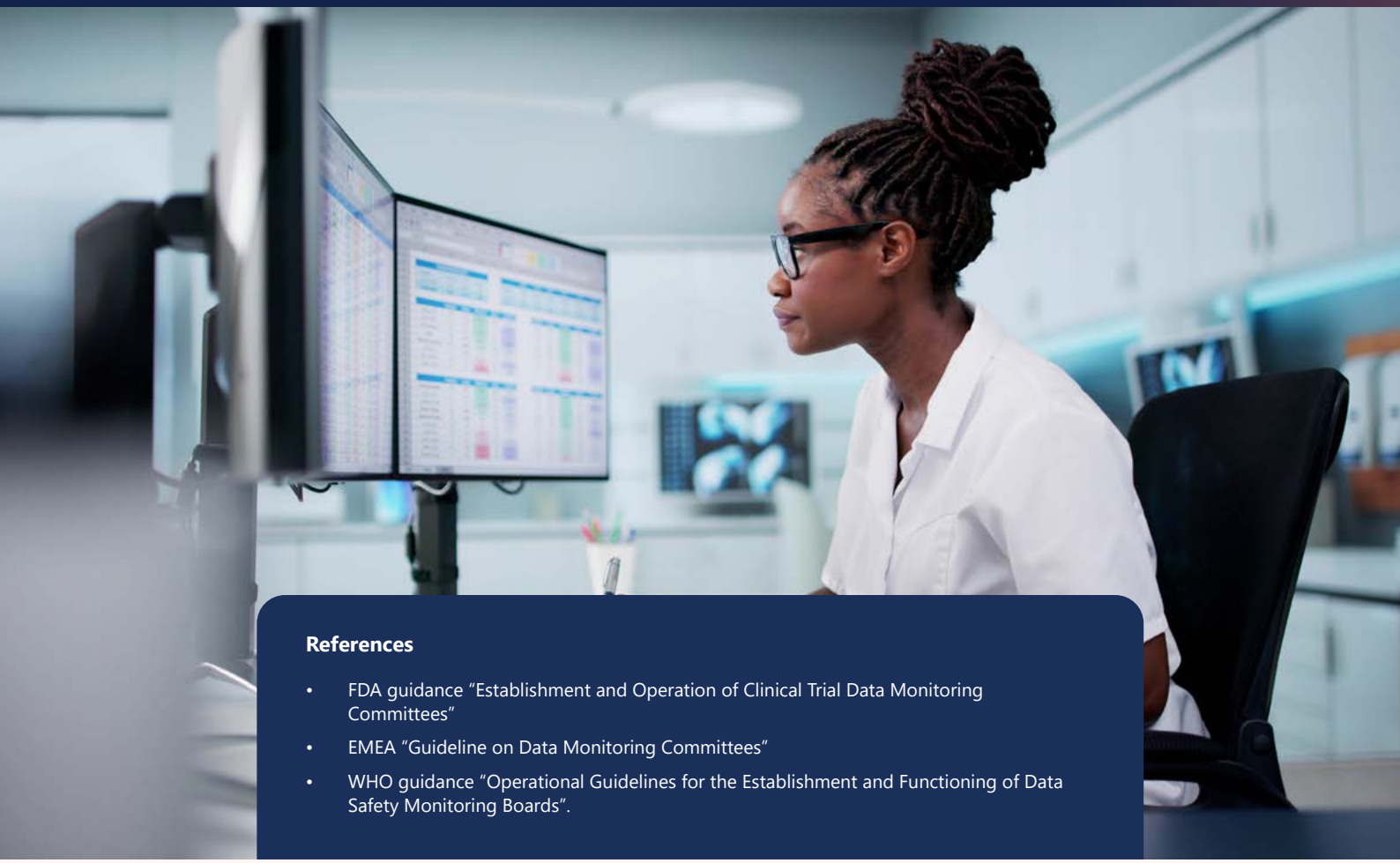
## The Impact

**The technical expertise and operational excellence provided by the Biostatistics team ensured:**

- delivery of all output on time for every IDMC meeting, with no quality issues,
- the IDMC had time to review the data and provide reassurance to the sponsor that it was safe to continue recruiting patients until a clear decision was reached on the efficacy of the drug.

**Given the expedited timelines and additional challenges of supporting an IDMC for a COVID-19 trial, the IDMC chair highlighted the team's work, commending the:**

- timeliness of delivery
- clear presentation of results
- responsiveness to queries
- robustness of Egnyte as a tool for sharing files



**References**

- FDA guidance "Establishment and Operation of Clinical Trial Data Monitoring Committees"
- EMEA "Guideline on Data Monitoring Committees"
- WHO guidance "Operational Guidelines for the Establishment and Functioning of Data Safety Monitoring Boards".

## Testimonials

You were always quick to reply, worked within our very tight timelines. You also helped wade through the ever-changing definitions that we had at the start and understood we were all learning what was needed, raising questions as appropriate. Given the schedule for the meetings, you were also very accommodating in fitting in dry runs. In terms of the meetings, you led the discussion of the outputs and navigated the questions that came from the panel members, triaging whether the questions could be unblinding and handling any you considered could be unblinding. Basically, I would definitely look to use you again!

**Director of Statistics, Sponsor Pharmaceutical company**

**Lets talk!**

If you'd like to discuss this case study further or learn more on how our biometrics services can support your development project, please visit our website: **mmsholdings.com**