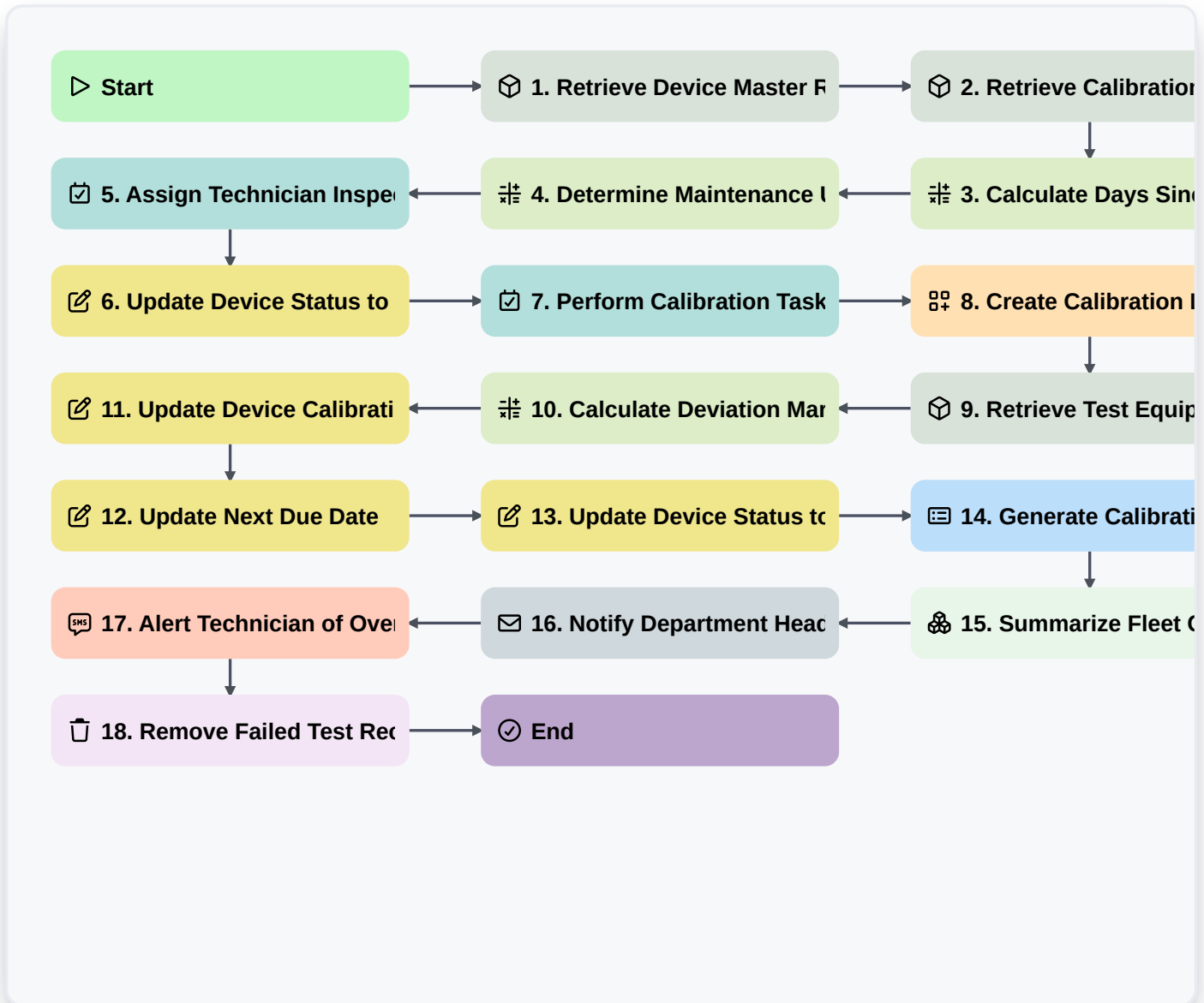


# Medical Device Maintenance And Calibration Workflow



## Start

Start of the Workflow/Process.

## 1. Retrieve Device Master Record

Fetch the specific medical device details, including model, serial number, and maintenance history from the Device Data Model.

## 2. Retrieve Calibration Schedule

Retrieve the predefined calibration interval and last calibration date for the selected device.

## 3. Calculate Days Since Last Service

Calculate the number of days elapsed between the current date and the last recorded calibration date.

## 4. Determine Maintenance Urgency

Compare days since last service against the calibration interval to determine if the device is 'Overdue', 'Due Soon', or 'Within Interval'.



### **5. Assign Technician Inspection Task**

Create a task for the Biomedical Engineer to perform physical inspection and cleaning.

### **6. Update Device Status to 'Under Maintenance'**

Update the status field in the Device Data Model to prevent clinical use during the process.

### **7. Perform Calibration Task**

Create a technical task containing a mandatory checklist for pressure, voltage, or accuracy testing.

### **8. Create Calibration Log Entry**

Create a new record in the Calibration Logs Data Model containing the results of the current session.

### **9. Retrieve Test Equipment Calibration Status**

Check if the tools/sensors being used for calibration are themselves within their valid calibration period.

### **10. Calculate Deviation Margin**

Calculate the difference between the measured value and the manufacturer's acceptable tolerance.

### **11. Update Device Calibration Date**

Update the 'Last Calibration Date' in the Device Data Model to the current date upon successful completion.

### **12. Update Next Due Date**

Update the 'Next Maintenance Due' field in the Device Data Model based on the maintenance interval.

### **13. Update Device Status to 'Operational'**

Change the status of the device back to 'Available' or 'Operational' in the system.

### **14. Generate Calibration Certificate**

Generate a formal PDF Certificate of Calibration containing all test results, pass/fail status, and technician signatures.

### **15. Summarize Fleet Compliance**

Aggregate all device records to calculate the percentage of the medical device fleet that is currently 'In Compliance'.

### **16. Notify Department Head**

Send an email to the Clinical Department Head notifying them that the device is back in service.

### **17. Alert Technician of Overdue Maintenance**

Send an SMS alert to the technician if a critical device is identified as being past its maintenance window.

### **18. Remove Failed Test Records**

Delete erroneous or duplicate test entries from the temporary testing log if the calibration session was invalidated.

### **End**

End of the Workflow/Process.