



The UML State Diagram for the Alert Generation shows the lifecycle of an alert, detailing its progression from creation to resolution. The diagram presents four main states: Generated, Sent, Acknowledged, and Resolved, along with transitions between these states.

At the start, an alert is Generated when the system detects patient data meeting predefined threshold criteria. This initiates the alert process. Subsequently, the alert transitions to the Sent state, indicating that it has been sent to the designated medical staff for attention. Upon receiving the alert, medical staff Acknowledge its receipt, acknowledging their awareness of the situation. The Acknowledged state prevents further notifications of the same alert, ensuring clarity and avoiding redundancy in communication channels. Finally, once the issue prompting the alert has been addressed, the alert transitions to the Resolved state, either automatically or manually by medical staff. In this state, the alert is considered resolved, and the system returns to monitoring the patient's condition.

This design choice aims to provide a clear and intuitive representation of the alert lifecycle and communication among stakeholders. By visualizing each stage of the alert process and the transitions between them, the diagram offers insight into the system's behavior and functionality.