ABSTRACT

ARI is an acute infection that affects one or more parts of the respiratory tract from the nose to the alveoli, including the adnexa (sinus, middle ear cavity and pleura). Risk factors that increase the incidence of ARI are environmental conditions (eg, air pollutants, density of family members), humidity, cleanliness, season, temperature); etc. While most people spend around 90% of their time indoors, according to research conducted in 2009, temperature, humidity and air quality variables have a 64.4% influence as risk factors that worsen patients suffering from ISPA. In line with the development of human civilization which no longer recognizes boundaries and distances, an IoT-based monitoring system for temperature, humidity and indoor air quality via Telegram for ISPA sufferers is needed because the method used in this tool is IoT, where the output from this tool can be viewed using the internet via the Telegram application. The results of data collection show that the temperature with the worst conditions for patients suffering from ISPA obtained using quantitative methods from the six research situations is 40.2°C, the highest humidity is in the first and fifth trials of the 3rd situation (in the box with anti-inflammatory drugs). mosquito spray) with a value of 71.4 RH, and the worst air quality was in the 3rd situation (in the box with anti-mosquito spray) in the second experiment with a value of 117.6 PPM, this happened because the MQ-135 sensor could detect hydrocarbons contained in anti-mosquito spray.

Keywords: ARI, *Temperature, Humidity, Air Quality,* IOT, Telegram