

ABSTRACT

The use of oxygen gas in the hospital is support and determinant in the process of restoring the patient's health condition. The purpose of this study was to produce a tariff calculation that was following the volume used by the patient, equipped with a central system and data storage, while the contribution of this study was to make it easier for the hospital to calculate oxygen so that it would not harm the patient or the hospital. The way this module works is by setting the regulator and rates then the data from the flow sensor will be processed using a microcontroller so that it produces the value displayed on the LCD and WEB with real-time delivery speed. Testing of this tool is to compare the module with standard measuring instruments where this tool produces the largest error value, namely 7.87%. Besides, the rate generated by the module is compared to the hospital rate. The results showed that the tool is feasible to use because the allowable deviation value in the flow meter accuracy is $\pm 10\%$. Meanwhile, the relevant tariff calculation is based on the volume of oxygen usage, not the hours of use. This research can be implemented in patients who are undergoing oxygen therapy at the hospital so that the costs incurred are by the volume of oxygen used.

Keywords: Oxygen Therapy, Rate, Volume, Flow Meter.