ABSTRAK

Metode non-invasive telah merevolusi cara pengambilan sampel darah. Metode invasive, seperti menusukkan jarum suntik pada jari, seringkali membuat pasien tidak nyaman. Sebagai contoh, metode invasive digunakan untuk memeriksa kolesterol, asam urat, dan kadar glukosa, yaitu merupakan penyakit tidak menular. Proses ini memerlukan pengambilan darah dan pencatatan hasil di kertas rekam medis. Kekurangan metode ini mencakup ketidaknyamanan bagi pasien yang memiliki kesibukan padat dan phobia jarum suntik. Oleh karena itu, penelitian ini mengembangkan alat untuk mengukur glukosa, kolesterol, kadar asam urat, dan temperatur tubuh menggunakan internet of things (IoT) dengan platform Blynk.Dari 20 kali hasil pengujian alat diperoleh, nilai glukosa berkisar antara 76–79 mg, kolesterol antara 122–125 mg, dan kadar asam urat antara 5–6 mg. Temperatur tubuh tercatat antara 36–37 °C. Persentase error hasil pengujian juga menunjukkan nilai yang kecil, di bawah 5%: rata-rata eror glukosa 2,53%, kolesterol 1,57%, kadar asam urat 5,74%, dan temperatur tubuh 1,08%.

Kata kunci: Diagnostik,Blynk,Internet of Things, Invasive, Non invasive.

ABSTRACT

Non-invasive methods have revolutionized the way blood samples are taken. Invasive methods, such as pricking a needle on the finger, often make patients uncomfortable. For example, invasive methods are used to check cholesterol, uric acid, and blood sugar levels, which are non-communicable diseases. This process requires drawing blood and recording the results on medical record paper. The disadvantages of this method include discomfort for patients who have busy schedules and needle phobia. Therefore, this study created a device to measure blood sugar, cholesterol, uric acid, and body temperature using the Internet of Things (IoT) with the Blynk platform. From 20 times the device test results were obtained, blood sugar values ranged from 76–79 mg, cholesterol between 122-125 mg, and uric acid between 5–6 mg. Body temperature was recorded between 36-37 °C. The test results' error percentage also showed a small value, below 5%: average blood sugar error 2.53%, cholesterol 1.57%, uric acid 5.74%, and body temperature 1.08%.

Keyword: Diagnostik,*Blynk, Internet of Things, Invasive, Non invasive*