









The chart in Fig. 10 presents the variation in time of the PWV recorded from a subject after he had some physical effort, he rapidly climbed stairs for 10 minutes.

#### IV. CONCLUSIONS

We choose to create a mobile medical device that perform long term PWV measurements, because this is an important parameter in determining the cardiovascular health or the response to some drugs administration, and we wanted to show the use of virtual instrumentation for developing devices with medical applications. Virtual instrumentation has the advantage of versatility, and due to graphical modular programming it is easy to learn and use, even by the untrained users.

In terms of medical applications and patient's welfare, we implemented the software on a mobile device, creating a tool for long term monitoring of patients at home, in their daily living and usual activities, which gives the freedom of movement, improving their quality of life. The mobile devices, such as PDA or smartphones, have the possibility to transmit data through GSM/GPRS or WiFi to the remote units, for the storage and further analysis. This represents one step forward in e-health and telemedicine.

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