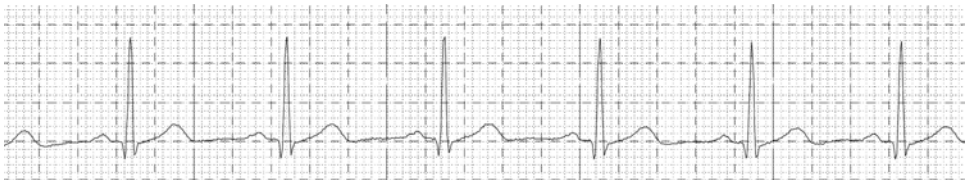
Applications of DiCare m1C for Cardiac Function Monitoring and Recording

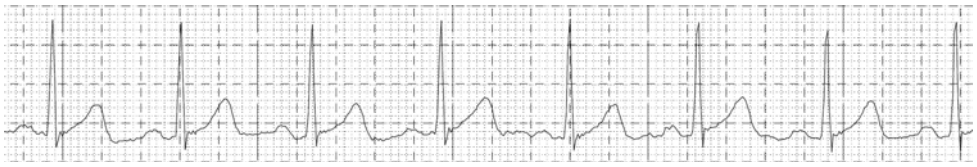
The medical grade ECG recorder DiCare m1C is a heart care device for home use where the effective cardiac monitoring is mostly missing. DiCare m1C device is designed for various situations in heart function monitoring and recording. It is easy and safe to use, and can help clinicians record heart function data accurately, which can be critically useful for capturing sudden heart attacks that may not be happening in clinics. It also helps accumulate the heart function data over a long period of time. Chronic patients as well as other people may use the device to record their heart function regularly to provide clinicians with more complete information. The following summarizes the common applications of DiCare m1C device with various illustrated ECG recordings that are from real people and patients.

Application one: Casual ECG recording for people on the go. Middle aged and older people tend to have high risk of cardiac problems due to common chronic diseases such as CHD, hypertension, diabetes, PHD, etc. They need to carry DiCare m1C for ECG recording or monitoring whenever necessary, especially when feeling fatigue, shortness of breath, and chest pain. They also need to monitor ECG during activities. DiCare m1C allows ECG to be recorded or monitored anytime anywhere in any movement. Quick mode can be chosen for casual ECG recording, and Monitor mode can be chosen for ECG monitoring.

Case 1: Male, 51y, healthy. V5 lead ECG was recorded on 2011-11-21 16:28:50 during walking 10min. while monitoring. HR=80bpm.



Case 2: Male, 54y, fatigue in exercise. V5 lead ECG was recorded on 2012-7-13 14:31:55 during 5min walking. HR=89bpm, slightly elevated ST-segment.

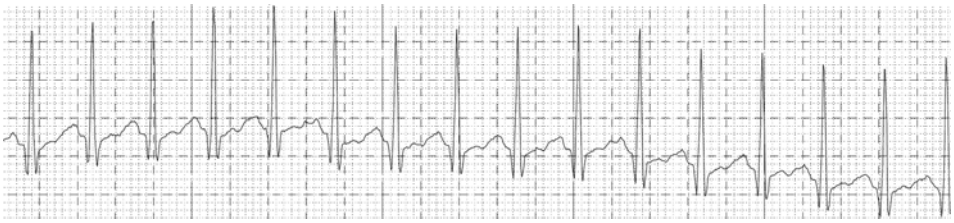


Application two: Real-time ECG monitoring and recording during exercise. Athletes and students have 6 times higher risk of sudden cardiac death (SCD) during strenuous exercise or sport game, and the evaluation with DiCare m1C before the activity will significantly avoid the risk. DiCare m1C uses only two skin electrodes and yet obtains highly reliable ECG signals even

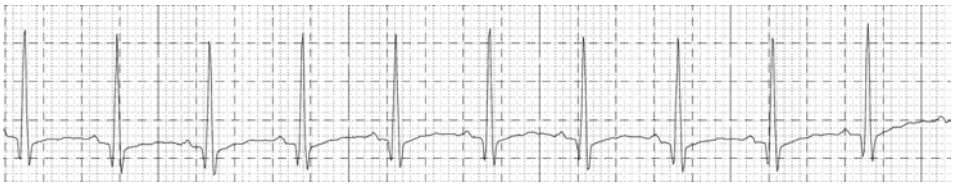
during strenuous activity. It also provides real-time ECG waveform display and heart rate monitoring.

Case 3: Male, 22y, no complaint. V5 lead ECG was recorded on 2012-7-3 17:10:22 when running just started. HR=91bpm, normal T-wave.

V5 lead ECG was recorded on 2012-7-3 17:16:26 when running 6min after. HR=190bpm, inverted T-wave.

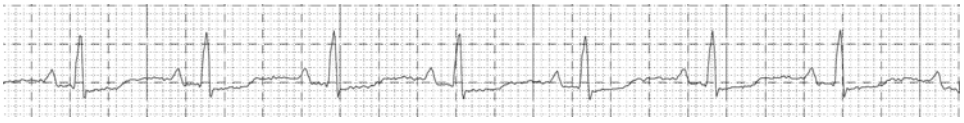


V5 lead ECG was recorded on 2012-7-3 17:22:37 when running stopped for 3min. HR=121bpm, unrecovered T-wave.



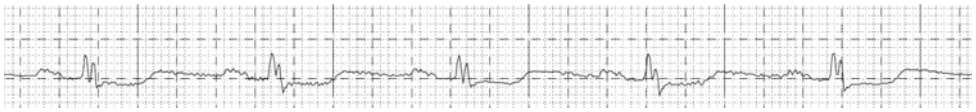
Application three: Quick ECG recording for cardiac ischemia and infarction. The manifestation of heart attack tends to be sudden squeezing chest pain, in which case prompt ECG recording can be critical for diagnosis and treatment. The quick mode of DiCare m1C can start ECG recording in a few seconds without cumbersome placement of skin electrodes for quickly capturing the heart attack event, anytime, anywhere, especially for those people having heart attack history and suffering from CHD or diabetes.

Case 4: Male, 23y, chest tightness. V3 lead ECG was recorded on 2012-6-8 15:22:40 during resting. HR=92bpm, depressed ST segment.



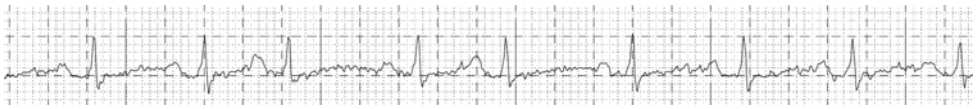
Case 5: Female, 25y, palpitations. V3 lead ECG was recorded on 2012-6-13 15:22:26 during resting. HR=112bpm, atrioventricular conduction block.

Case 6: Male, 50y, fatigue. V3 lead ECG was recorded on 2012-6-11 11:48:54 during resting. HR=63, myocardial infarction.

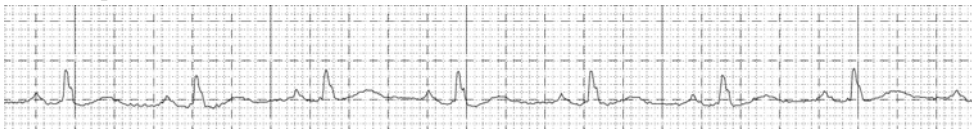


Application four: ambulatory and event ECG recording for paroxysmal arrhythmia. The 24 hours ambulatory (Holter) ECG recording is very useful in capturing paroxysmal arrhythmia that occurs unexpectedly. For even longer period of time, event mode should be used similar to Holter. DiCare m1C can continuously record up to 32 hours ECG, and also can capture ECG events over even longer period of time. The operation is as easy as a single press of button.

Case 7: Male, 60y, chest tightness. V3 lead ECG was recorded on 2012-6-11 11:56:14 during resting. HR=108bpm, supraventricular premature beats.

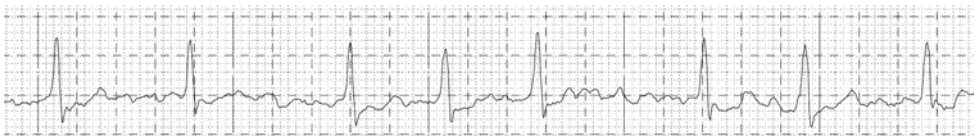


Case 8: Male, 60y, fatigue. V3 lead ECG was recorded on 2012-6-8 15:44:39 during resting. HR=89bpm, ventricular conduction block.



Application five: daily recordings for chronic cardiac patients. All the chronic cardiac patients, such as chronic arrhythmia, ischemia, myocarditis, cardiomyopathy, need to record ECG regularly for monitoring the progression and treatment follow-up. DiCare m1C allows the patients themselves to quickly and conveniently record ECG anytime anywhere on daily bases, and then bring back to clinicians for more accurate evaluations.

Case 9: Male, 67y, chest tightness. V3 lead ECG was recorded on 2012-6-12 10:44:10 during resting. HR=96bpm, atrial fibrillation.



Application six: cardiac function evaluation and monitoring during perioperative period for surgeries including heart stents, by-pass, and ablation. The complications after the surgery are much higher for patients with unstable ECG activities and with diabetes or hypertension, where the complication occurrence may happen even 30 days after the surgery. DiCare m1C allows the patients to record and monitor ECG with quick mode (before surgery) and Holter mode (after surgery) to reduce malignant consequence due to the complication. Each patient ready for the cardiac surgeries should use DiCare m1C to record and monitor their ECG.

Case 10: Male, 86y, fatigue. V3 lead ECG was recorded on 2012-6-13 16:30:57 during resting. HR=68bpm, ventricular conduction block.