COMARCH
Healthcare

REMOTE MATERNITY CARE

Telemedical Cardiotocography Performed at Home

REMOTE MATERNITY CARE

Remote Maternity Care is a solution for safely monitoring a baby's heart rate and uterine contraction activity at home. Using mobile devices, patients can perform non-invasive CTG tests at any time and in any place. Data is automatically transferred to the dedicated Remote Medical Care Center for a detailed analysis. Medical staff interpret the test results within the framework of dedicated procedures, and take action where any risk to the health or life of patient or baby is identified.

BENEFITS OF REMOTE MATERNITY CARE

For the Medical Unit

- **Monitoring patients between appointments**
- **Shorter times of hospital treatment**
- **Monitoring high-risk pregnancies**
- **Convenient access to patients' medical data**
- **Improvement of image and boost of institutional reputation**

For the Patient

- **Home CTG monitoring at any time**
- **Continuous registration of the baby's health**
- **Greater comfort and incresed sense of safety thanks to 24-hour care**
- **Shorter responce time to life and health threats**
- **Easier and safer acces to patients' own medical data**

EXAMPLES OF USE

CTG tests allow early recognition of any risks to the baby's life. Cardiotocography is the fundamental and most popular non-invasive method for monitoring the baby's health during the pregnancy and in the perinatal period. The solution is intended for women between the 36th and 42nd weeks of single pregnancies. Before entering the Remote Care mode, each patient needs a consultation with their obstetrician for qualification purposes.

Continuous Monitoring

Patients perform their CTG tests according to the instructions of their doctor or midwife, at recommended intervals and times, and in recommended conditions. The monitoring is dedicated to women with a history of pregnancy problems, with coexistent illnesses, or of a certain age (over 40).

Patients perform their CTG tests individually. Recording takes 30 minutes, and the result is automatically transferred to the Remote Medical Care Center for interpretation and description.

After each measurement the patient receives information on the result. Where any irregularities occur, medical staff take appropriate action.

Complete Care

A patient monitor the health of their baby within their perinatal prophylaxis. In this way pregnant women are being taken care of between appointments with their doctor or midwife. Recordings are taken at times selected by patients, or whenever alarming symptoms occur. In addition to the medical aspects and the ability for swift action to be taken in the event of emergency, Remote Maternity Care allows a woman to listen to her baby's heartbeat at any time, which positively affects their emotional and mental well-being.

BENEFICIARIES

Remote Maternity Care is applied widely in the medical market, as it complements and supports the existing system of health care services. The solution is dedicated to hospitals, out-patient clinics, antenatal classes, and individual doctors' and midwives' consulting rooms. It can also be customized for regional platforms or transformation projects that develop or modernize hospitals' medical infrastructures.

MODELS OF COOPERATION

The implementation model of Remote Medical Care and its functional scope are adapted to the needs and scale of a specific contractor. Depending on the type of activity, it is possible to use different variants

LEASE MODEL

Leasing CTG devices and providing remote monitoring services as well as test result descriptions performed by staff at the Remote Medical Care Center

SERVICE MODEL

Providing remote monitoring services and test result descriptions performed by staff at the Remote Medical Care Center

In each variant, the contractor can monitor their patients independently or transfer them directly to the supervision of specialists from the Remote Medical Care Center, located in the iMed24 Medical Center in Kraków.

Other customized models can be tailored to individual needs

COMARCH E-CARE PLATFORM

The provision of Remote Maternity Care services is possible thanks to the Comarch e-Care Platform, which allows patients' life parameters to be monitored constantly on a remote basis. The platform can revive and process medical data obtained from measuring devices. It also supports medical staff in the performance of pre-determined procedures.

COMPONENTS OF THE COMARCH E-CARE PLATFORM

Comarch e-Care Application with Web Interface

Allows connection of telemedicine equipment, receiving and managing data, graphic visualization of data consistent with medical standards, integration with HIS class systems, geographical location of patients, managing work and procedures of intervention personnel, contact with patients through audio and video channels, and the performance of medical consultations in a workflow system.

The application helps interpret measurements. High quality results and the incorporated algorithms that automatically analyze the recorded values guarantee precise monitoring. Thanks to patients being registered in the system, medical staff have access to complementary information such as doctor's recommendations, the course of pregnancy, or medication.

CTG Device

A mobile device for performing cardiotocographic tests at home. The acoustic measurement method allows non-invasive recording of the baby's heart rate and uterine contraction activity. The device transmits data to the Remote Medical Care Center through the mobile telephony network.

Comarch e-Care Platform supports medical staff's work and helps automatically qualify cardiotocographic examination results based on algorithms that describe:

- Baseline Fetal Heart Rate (BFHR)
- Bradycardia and tachycardia
- Decelerations
- Accelerations
- Long term variability (LTV)
- Short term variability (STV)

REMOTE MEDICAL CARE CENTER

Remote Medical Care Center, staffed by a medical team who monitor patients 24h by receiving and interpreting CTG test results, is the key component of the remote care system.

Monitors patients' health parameters around the clock, including on holidays

Takes action in the event of an emergency

Employs qualified medical staff including para-medics, midwives, doctors of various specialties, dietitians and therapists

Uses medical workflows (procedures) to enable faster and better directed interventions

PHYSICAL AND TECHNICAL PARAMETERS OF THE CTG DEVICE

Physical dimensions	**20 x 11,5 x 4 mm**
Weight	**885 g (CTG device: 615 g, side supports: 270 g)**
Data transfer	**wireless (GPRS)**
Temperature range	**operating temperature: 15˚C; storage temperature: 0 – 40˚C**
Output	**max: 1 W**
Sensitivity of the fetal heart rate monitor	**5 mV/(N/m2)**
Charger's input voltage	**AC 100-240 V, 50-60 Hz, max. 0,6 A**
Charger's output voltage	**DC 9 V, max. 3 A**
Maximum charging time	**4 hrs**
Battery capacity given one measurement per day	**7 days**

COMARCH
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FACTS AND FIGURES ON COMARCH HEALTHCARE

MORE THAN
80 HOSPITALS
USE OUR SYSTEMS

EVERY DAY
ABOUT
30 000 USERS
LOG ON OUR SYSTEMS

MORE THAN
200
OUTPATIENT FACILITIES
USE OUR SOFTWARE

WE SUPPORT
THE HEALTHCARE SECTOR
24/7
365

IN 2015
2500 PATIENTS
WERE COVERED BY OUR REMOTE MEDICAL CARE

WE PROVIDE SOLUTIONS FOR ALL
MEDICAL FIELDS

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Comarch Healthcare S.A. has an implemented and certified quality management system ISO 13485 for the design and manufacture of medical devices. The Comarch e-Care platform is a class IIa medical product, certified for compliance with Directive 93/42/EEC.