PST
PROCESS SENSING
TECHNOLOGIES

Temperature Monitoring of Medicines

With its ultramodern loggers, the Rotronic Monitoring System (RMS) reliably measures the temperature in phar-maceutical warehouses and sounds an alarm via RMS software if the defined limit values are exceeded. A stable temperature is extremely important and also required by law. Many pharmacieplus pharmacies rely on Rotronic's user-friendly system to save time and money.

"The RMS runs very stably and is user-friendly."

Sylvie Hug
pharmacieplus AG

Mini temperature loggers at work

Situation

Pharmacies throughout Switzerland are subject to strict laws (HMG Therapeutic Products Act), which prescribe at which temperatures certain medications must be stored. To meet these requirements, the temperatures in the re-frigerated medicine cabinets are checked and documented regularly. Following damage in a pharmacieplus pharmacy due to an excessively high temperature, a number of phar-macieplus branches opted for the monitoring system from Rotronic.

The prerequisite for this was that the protection of patient data could be guaranteed, which is why many safety pre-cautions had to be observed. It further had to be ensured that the data would be stored for ten years. They can be requested and inspected during the annual checks by the cantonal pharmacist. In addition, the majority of pharma-cieplus pharmacies are certified to ISO 9001. In the case of possible controls, it must be possible to track the data.

Technology

At pharmacieplus, the monitoring system is operated by Rotronic data loggers, which communicate with the software via an 868 MHz wireless connection via gate-ways or directly via LAN connection. The data loggers are positioned in the corresponding rooms and are set so that they record the temperatures – depending on require-ments – every 10 seconds up to every 15 minutes. Most of the devices are used in refrigerators, as medicines stored there are particularly sensitive to temperature fluctuations. In the central warehouse and headquarters in Bremblens (VD) it was decided to collect and record the humidity as well as the temperature.

The mini logger sends the data via radio to a gateway, which transmits them via Ethernet to the server. The gateway must be installed at a point in the branch where the wireless connections to all data loggers are ideal. The data are transmitted to a server via the network and stored there centrally. The alarm ensures that a warning message is triggered immediately if the temperature rises or falls. This can be set individually in each branch.

Procedure

After setting up the software on one of the hosting company's servers in Geneva, the first productive RMS logger was installed at the headquarters in Bremblens (VD) by remote engineering and in cooperation with Rotronic. After successful commissioning, the other pharmacieplus sites were able to access this application directly. Of course, the necessary infrastructure also had to be installed in these pharmacies. pharmacieplus AG has launched a campaign that enables interested pharmacists to purchase the system on favorable terms and, at the same time, to take advantage of support during installation.

Logger for humidity and temperature

Challenges

The greatest challenge lay in maintaining data privacy and the high security standards of the systems. The pharmacieplus data center and server environment therefore have high security standards, which made configuration of the Rotronic system more complex. In addition, it was difficult to bring together the various people involved in the project from pharmacieplus and Rotronic.

The latter were responsible for configuring the software and implementing the project. On the customer side, in the pharmacies on the ground, Sylvie Hug was responsible for IT support, configured the hardware at all locations, and trained the employees. Various project steps were planned and implemented via telephone conferences. For Sylvie Hug, the cooperation with Rotronic, in particular with Marcel Rohrbach (Sales) and Ayman Nagy (Service), was extremely pleasant and goal-oriented: "The RMS is running very stably and is user-friendly. Many initially somewhat skeptical pharmacists are thrilled today."

Results

In 2018, the Rotronic system was introduced in almost half of all pharmacieplus pharmacies. Shortly after its launch, users were enthusiastic about the simplicity of system handling and saw the added value of automatic temperature monitoring and individually configurable alarms. The data are now recorded reliably and accurately every minute and can be viewed at any time over various periods of time. This saves time and simplifies control over compliance with temperature regulations.

Sylvie Hug and Zejnep Mejdi (pharmacieplus) with Marcel Rohrbach (Rotronic) at pharmacieplus in Vuadens (FR)

About pharmacieplus AG

The members of the pharmacieplus group, all of whom are independent pharmacists, offer their customers health competence, personal advice and high-quality healthcare services. The pharmacieplus group was established 24 years ago by a number of independent pharmacists. This pharmacy network currently consists of 87 pharmacies, i.e. almost 1000 employees in French-speaking Switzerland, but also in German-speaking Switzerland and Ticino.

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