# Ordensklinikum Elisabethinen Linz achieves top rankings

The Cerner i.s.h.med HIS helps hospital reach Stage 6 of the HIMSS EMR Adoption Models (EMRAM)

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# From Access to HIMSS 6

## The Ordensklinikum Elisabethinen Linz achieves top rankings with its IT equipment

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**At a glance**

The Ordensklinikum Elisabethinen in Linz, Austria is the first *i.s.h.med®* medical institution in the German-speaking market to achieve the second highest stage of the HIMSS EMR Adoption Models (HIMSS EMRAM). The high degree of digitalization in the 460-bed hospital reflects the institution's ongoing expansion efforts and its consistent focus on the requirements of users. The IT department is guided by the paradigm of providing a lean and therefore low-maintenance system by mapping as many functionalities as possible into *i.s.h.med.*

The popular image of Linz, the capital of the federal state of Upper Austria, is probably shaped by its cultural achievements with festivals and theater. Since the beginning of 2018, however, the city has also been known, at least in specialist circles, as the first hospital in a German-speaking country to reach Stage 6 of the HIMSS EMR Adoption Model (EMRAM), with the support of the Cerner *i.s.h.med* HIS.

This success is above all due to the team of Claudia Perndl, the IT manager at Ordensklinikum Elisabethinen Linz. "Actually, we only wanted to see with the HIMSS EMRAM classification how far we have come in our

hospital with digitalization and where there are still gaps," Claudia Perndl explains. "It took us a little bit by surprise and of course made us very happy that we reached Stage 6 in the first audit."

### The starting point: Access databases and an SAP platform

The fact that the 460-bed facility with 1,200 IT workplaces has such a powerful IT infrastructure that it must not fear comparison with large hospitals is the result of continuous work and the vision that hospital IT is much more than just a tool for processing administrative data and documents. The story begins back in 1999, when Claudia Perndl was hired at the Ordensklinikum as the project manager in charge of developing *SAP IS-H* as an administrative system.

She recalls: "At that time, the 'HIS' consisted of an Access database, in which parts of the documentation were carried out. It was the early days of hospital IT, when homemade isolated solutions were the standard." Even back then, the lack of standardization and the pitfalls of connecting with interfaces were apparent: "It doesn't take much imagination to see that it is hardly possible to efficiently connect documentation and administrative systems via interfaces."

Furthermore, it was clear even at this early stage that the documentation system would no longer meet the requirements of the medical staff in the foreseeable future. "In many areas of our hospital, employees noticed that well-configured IT could simplify their work. It has almost become a tradition that our IT development is driven by IT and users together," the IT manager explains.

### Isolated solution replaced by a powerful HIS

Accordingly, it was decided two years after the introduction of the SAP platform to replace the old Access databases with a futureproof solution. Even at that stage, the Ordensklinikum IT manager took a view to which she has remained faithful to this day: "An HIS must be as simple as possible and the individual modules must interact with each other smoothly. In

other words, as many functionalities as possible will be mapped in the core system. Subsystems, as well as interfaces, should be kept to a minimum. This saves maintenance and operations efforts, makes the infrastructure less vulnerable, and frees up resources in the IT department to further expand IT. But users also benefit from this: they only have to familiarize themselves with and operate one system."

### Success factors: close orientation to the users and a flexible, open HIS

Based on these forward-looking considerations, it was decided to rely on the *i.s.h.med* HIS from Cerner in the future. This also had the advantage of being the only system integrated into the SAP world. In the following years, the HIS was further expanded. As previously, it was the users who pushed the development forward, Claudia Perndl explains: "Our standard has always been the satisfaction of our customers, i.e. the users. We spend a lot of time in the planning stage, analyzing the requirements so that we understand exactly what our customers want. Once we understand that, we try if possible to implement the necessary functions in *i.s.h.med* to keep the system simple. Since the HIS offers the possibility of programming our own developments, this is no issue in most cases. Especially the open architecture and the possibility to design applications ourselves gives us the flexibility we need to find customized solutions with reasonable effort and to implement them so that the infrastructure still remains 'slim'."

However, this also means that the IT department co-decides to the timelines of developments. "Our users have a great deal of understanding for the fact that occasionally, they have to wait longer than usual for a new functionality. We communicate very closely with them and as a result they understand that one IT development is built on the previous one and it's important to stick to the right order."

### Cerner's strong local presence in Austria facilitates cooperation

Claudia Perndl's 15-member IT team also receives support for the implementation of their plans from external partners, including HIS supplier Cerner.

"The strong local presence of Cerner in Austria really benefits us," explains Perndl. "The fact that *i.s.h.med* has been developed to a large extent in Austria makes the communication paths even shorter." The close contact pays off for both sides, as Claudia Perndl illustrated by

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means of an example: "Around 2014, we were so far with the expansion of our HIS that we were only missing the patient chart. Our idea was of the patient chart as an integrated cockpit in the HIS. At that time, the corresponding module had just been revised by the manufacturer, which is why we applied to the manufacturer to become a beta tester.

"Two years later, we were able to test the new patient chart in our pulmonary department. I should mention that this department consists of one intensive care as well as two regular units. We were able to test the full range of applications of a patient chart – from the different requirements to patient transfer scenarios." The feedback from this test flowed directly into the further development of the patient chart. The result convinced even the skeptical IT manager: "When we switched to the final patient chart, we did so without any paper backup. Because the solution was highly customized and practical, we could spare our users the extra work. And its success proved us right."

### The result: an exceptional degree of digitalization

The introduction of the new patient chart had another effect: "Visitors from other hospitals came to see the solution," reports Claudia Perndl. "In our conversations, we were told again and again that such a high level of development of the IT infrastructure is fairly unusual. Some of our visitors were amazed at what we had achieved with *i.s.h.med*." In order to get an independent opinion and to find out where there might still be gaps, Claudia Perndl and her team decided to apply for certification according to the HIMSS EMRAM model, with the result that they were rewarded with the second highest stage.

"We were not aware that we had reached such a high level of development," says Claudia Perndl. "But our continuous work and our focus on the needs of our users has obviously paid off." And she and her team intend to stay on the ball: "Our department is divided into an area responsible for system operation and an area that constantly develops the infrastructure," the IT manager explains. "This makes it possible for us to keep our infrastructure up to date."

### The future is already here: better performance by switching to S/4HANA

It is therefore no surprise to learn that the Ordensklinikum Elisabethinen databases have now been

Graduate Engineer Claudia Perndl,
CIO at the Ordensklinikum Elisabethinen Linz

migrated to HANA. "Since we had to replace our hardware in any case, we took the opportunity to convert first *SAP BW* and then the old R3 system to the new technology." This foresight paid off immediately: "Although there are no specific applications for the new database, we have seen a massive improvement in the performance of our HIS. Of course, our users are especially pleased about this."

And the next projects are already lined up: "The upcoming merger with the Ordensklinikum Barmherzige Schwestern (Sisters of Mercy Clinic) of course also has the effect that the IT infrastructure must be harmonized. We've just started this major project." Then she adds with a grin: "HIMSS EMRAM Stage 7 is of course another objective."

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