





With a Heart for Children

With complete dedication, great sensitivity, and a wealth of medical expertise, doctors and nursing staff are battling for the lives of very young patients at the Clinic for Congenital Heart Defects at the North Rhine-Westphalia Heart and Diabetes Center. Porsche Consulting is providing even greater process stability here, where optimism and cheerfulness are part of the successful treatment.

📄 Reiner Schloz, 📷 Matthias Hangst

From his office, the head of pediatric cardiology can see everything that's going on. Using a keyboard and remote control, Professor Deniz Kececioglu pulls up photos and diagrams on the screens that the layman couldn't even begin to understand. Vital data on patients who have recently undergone surgery are sent directly from the intensive care unit with its 15 beds to the professor at his desk: heart rate, blood pressure, breathing—everything is fine. And there is still enough time to link up with the cardiac catheter laboratory via computer and flat screen to look at the photos of an examination taking place there.

Here, where good deeds take place, the latest technology is used to save lives that have only just begun. At the North Rhine-Westphalia Heart and Diabetes Center in Bad Oeynhausen, 300 operations a year are carried out to correct congenital heart defects and give the majority of the small patients a “virtually normal life” (Professor Kececioglu). A third of the operations are actually life-saving. Around 40 percent of the patients who are referred by consultant surgeons to Pediatric Cardiology are babies; just under 15 percent of the patients are adults who have been treated here since birth.

A responsible everyday balance between medicine and sympathy. Dialogue usually takes place with helpless and desperate parents; communication with the small patients is often restricted to the essentials. “Children,” says Professor Kececioglu, “would never cry if they never experienced pain or fear.” Quite simply and appropriately, the motto in the department is “Life must go on!”

And get even better? Professor Kececioglu has his own ideas about working with sick children. When he started working in Paediatric Cardiology at Bad Oeynhausen ▶

one and a half years ago, he found “outstanding people” and a team that had found a “formula for how the work was done.” But during his time at Freiburg University Hospital, he had found that while doctors were striving for the highest level of medical achievement and optimum patient care, efficient working sometimes fell by the wayside. At that time, consultants from Porsche Consulting, in a pilot project on cardiac and vascular surgery—strictly on the principles of lean production in industry, had shifted the relationship between added value and waste, standardized work routines, created transparency, optimized the interfaces between admissions and the ward and between doctors and nursing staff, reduced the

length of patients’ stay, and at the same time improved quality, increased capacity, and reduced costs.

Some time has passed since then. What for Porsche Consulting began as a successful experiment has long since developed into a much sought-after expertise on the German hospital scene. Production experts have been reinforced with doctors who carry the Porsche gene: Out with waste. Pediatric Cardiology at Bad Oeynhausen will now reap the benefits of this. Professor Kececioğlu: “We needed an outsider’s view.” Managers at the hospital saw this, too. Professor Otto Foit, managing director of the NRW Heart and Diabetes Center—and



It's a date—Professor Kececioğlu (center) and colleagues visit the intensive care unit

also of the University Hospital of the Ruhr University of Bochum—is always conscious of the good reputation of the center with its 1,800 employees, and sums up the minor weaknesses in everyday working life with some humor: “No feature in hospital services is more important than the ability to improvise. This is good—but professional and transparent work structures make patient care in an organization based on the division of labor easier and avoid unnecessary stress for employees.”

The Porsche consultants are familiar with the problems. The team was led by two health economists; a doctor, Daria Ostovan; a former nurse, Gerald Tomenendal;

and Klaus-Dieter Pannes, an industrial engineer with experience in procurement and sales projects at Porsche AG. It got down to the job at hand: “Most things that affect everyday efficiency at a hospital are well-known and obvious,” says Ostovan, “but we had to quantify them and find ways to resolve them.”

When they first presented their proposals, which is normally a straightforward affair before a few decision-makers, the Porsche consultants found themselves in an auditorium with 80 people. According to Pannes, “The interest was enormous.” There was also a touch of skepticism. Doctors felt that their individual freedom was ▶



Good improvement: For babies, the fight for life begins in their sleep



“The analysis was very exciting, and the times allowed were made clearly transparent.”

Marlies Krall, Head of Nursing



“We must use our time effectively. That’s what the Porsche people said to me in a nice yet very clear way.”

Professor Deniz Kececioğlu

threatened; nurses sensed staff cuts—a fear that the close involvement of the works council in the project was soon able to dispel.

Using value stream analysis (see also the following article), Porsche consultants proceeded to illustrate the daily routine of doctors and nursing staff on a sheet of A4 paper. The consultants sometimes accompanied the people involved as they went about their work; at other times, nurses were given stopwatches to establish how things were going and what doctors were doing in minutes and hours. Even willing parents were given the in-

corruptible timekeeper to gain solid data on their journey through outpatient. In addition, all the controlling data were part of the analysis. The results led to five workshops involving synchronization between doctor and care, admission into surgery, the patient’s perspective as outsider, the organization of the outpatient clinic, and the documentation.

Ultimately, the majority of the team was convinced by what was happening. “For the nursing staff especially, the workshops were a real motivational impetus,” says works council member Volker Mellies. And in the course



“The standardization of processes and guaranteeing of process stability are even more important in hospitals than in car manufacturing because a recall campaign is usually not an option.”

Professor Otto Foit



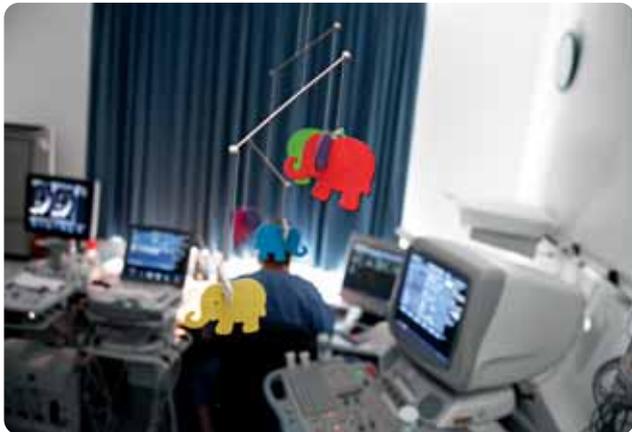
“I always tell our colleagues that they don’t have anything to fear from the Porsche people, but rather that we don’t consistently put the stimulating ideas they offer into practice.”

Works council member Volker Mellies

of the implementation of the agreed measures, Head of Nursing Marlies Krall comments, “The documentation has improved, the relationship between doctors and nursing staff has changed, and times are better harmonized.” As a further team-building exercise, there was a visit with doctors and nursing staff after work to a sugar factory to make lollipops together. Another way to sugar the pill.

As a result of the analysis, the level of added value in the work of the unit’s doctors has increased by 52 percent. In the outpatient clinic, too, the hours are ticking away

differently now. Waiting times have been halved and are now less than 15 minutes. Discharge is usually early, and the final discussions with parents are held the day before. To be on the safe side, parents are sent a postcard to remind them of examination appointments. Junior doctors now have just one meeting a day (instead of the previous three). One of the most important changes, however, is that rounds now take place at fixed times, which, Professor Kececioglu acknowledges, has been the biggest change for him. “Before,” he says, “I did my rounds when I felt the time was right. The new way makes much more sense. The parents and appropriate nurses can now be ▶



Top: High-tech helps save lives

Center and bottom: Gerald Tomenendal (center left) and Daria Ostovan (bottom left) discussing a situation with staff

involved without any timing problems. We simply have to be more committed with our time.”

The consultants also have become involved in the transfer of the patient from the operating room to the intensive care unit. Like a pit stop in Formula One, the workplace, the equipment, the routine, the concentration of the medicines, and the number of people involved in the treatment have been defined and standardized, so a uniform system could be developed covering several departments (surgery, anaesthetics, and cardiology). The transfer time before the new set-up was over 15 minutes; it was then defined in the workshop at five minutes and reduced in practice to just under three minutes. Apart from the improvement in quality and optimized timing, a noticeable reduction in costs has been achieved.

Life in Pediatric Cardiology with its 26 doctors has changed, and an ongoing process of improvement has been introduced. Professor Foit: “A dynamic of this kind created in such a short space of time would never have been possible with one organization acting alone. It is important to include all areas and people in one clinic at the same time.” He has already given the go-ahead for another project, analysis for diabetology. Professor Foit is banking on another success. To him, the fact that the number of unplanned hours of overtime in Pediatric Cardiology has been significantly reduced is a good sign, and further work will be done on improving quality “with a low input of resources.”

In the meantime, Pediatric Cardiology is aiming even more than before for a positive atmosphere. With all means possible to make children’s hearts beat more strongly. The artist Peter-T. Schulz, alias Olle Hansen, has made it a place that is colorful and friendly, with rainbows, rocking horses, and a mighty ship where previously mute shades would be the norm. The area is more like a nursery school than a pediatric cardiology



A colorful sight: Cheerful colors are the order of the day in Pediatric Cardiology at Bad Oeynhausen

unit. The members of the judges' panel at Expo 2000 found the concept of "high-tech and human warmth" so convincing that the clinic was presented as a "Worldwide Expo Project 2000." For relatives, there is also, barely a stone's throw away, the parents' house, built using plans by the top U.S. architect Frank O. Gehry. Its design enables parents to choose to be alone or with others. Nevertheless, Professor Kececioglu and the other doctors must once again encourage or give comfort—comfort the relatives often need more than the patients

themselves. "Children," says the professor, who knows this from years of experience, "are much more resilient than parents realize." ◀

“Process Level in Porsche Quality”

Professor Otto Foit, managing director of the North Rhine-Westphalia Heart and Diabetes Center, gives a positive provisional appraisal of the work by Porsche Consulting.



What made you decide on the project?

Professor Otto Foit: Our management, which has been successful for some years, is based primarily on the principle of “act, don’t react,” because the timely implementation of correct strategic measures prevents crises. This strategy also involves continuously testing and optimizing the performance program and performance processes.

What are the benefits for the center?

Foit: Using process optimization, we can improve our operating performance and long-term competitiveness on a sustainable basis. Naturally we also want to reduce expenditures, but not at the cost of quality and evolved structures. The optimization of routines and a conscious discussion with colleagues of daily procedures produce a new sensitivity in terms of efficiency. The economic aspect emerging from this benefits the patients directly in our non-profit organization and helps finance top medical performance.

How did you find Porsche Consulting’s approach?

Foit: Using training and a “cardboard simulation,” Porsche Consulting was quickly and very clearly able to show how simply and effectively everyday work can be improved. Our staff quickly gained confidence and fully participated in the tailor-made workshop activities. In this way, they have been able to implement the process changes achieved directly in their daily work. A major factor in this was that Porsche Consulting and its professional team was able to influence staff extremely intensively throughout the project.

What conclusions can you draw from this project?

Foit: The decision to use external analysis and consultation was the right one. Patient-remote activities such as

waiting, search procedures, bureaucracy, and avoidable discussions should, in the interests of the patients and their relatives, be kept to an absolute minimum. The Porsche analysis gives very useful pointers, so we were able, with the expertise of the consultants, to change many routines and procedures in a targeted way and upgrade to a “Porsche quality” level.

How are the successes assessed?

Foit: In addition to specific solutions, Porsche Consulting—chiefly through the long-term establishment of the workshops—has created the structure for an ongoing improvement process. The Clinic for Congenital Heart Defects has been given the tools to continuously make improvements. Now we have to maintain and use the dynamic that we achieved. ◀



Full speed ahead: The Bad Oeynhausen project team