



State of the art – also tomorrow!

ORIGINALLY PUBLISHED IN JOURNALEN NR 14/2013

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INTERVIEW WITH THE DEPARTMENT OF DENTISTRY AT AARHUS UNIVERSITY, DENMARK

The Department of Dentistry at Aarhus University in Denmark renewed all of its simulation and treatment facilities. It is now an ultramodern institution with Planmeca's high-technology solutions that will answer the needs of dental education for a long time to come.

Facts

- 192 Planmeca Compact™ i Touch units and 20 Planmeca simulation units
- 8 surgical units with Planmeca patient chairs and ceiling-mounted instrument console and monitor
- The first installation in 2009 and the last 93 units installed in 2012

According to **Ellen Frandsen Lau**, Head of Department of Dentistry, a great emphasis in the department's renovation was placed on the interiors and colors of the different rooms. "We thought a lot about how we wanted to rebuild the space. Walking around our school, one can immediately see that the different clinics have different interiors. This is a conscious choice since they also have different needs and purposes. For example, there's an open structure in the student clinics that are meant for learning the everyday work of a dentist. An open area creates good conditions for practical training and instruction."

It is clear to see what Frandsen refers to. The waiting rooms are lively with fresh, green color, whereas the clinical rooms have more neutral colors to calm down the patients who are nervous about the treatment. In contrast, the chair upholsteries of the Planmeca dental units at the children's clinic are glowing in various bright colors and the walls are covered with happy pictures to create a smile on the little patients' faces. This gives a good start for the child's treatment process with the dentist.

Future-proof technology

However, it's not only on the outside that the Aarhus Department of Dentistry is modern. In connection with the throughout renovation, all the equipment in the school was replaced with the newest technology. "It was planned so that we not only have

state-of-the-art technology today, but that we also have clinics that are set for future development. That is absolutely crucial", says Frandsen. "It is so rarely that we can make this kind of renewals that it makes no sense to create the best for just today's needs. We have to also build for tomorrow. I think we have achieved that here, which I'm really happy for."

Well-defined expectations

The project group that the Department of Dentistry had appointed for the proposal process was extremely thorough in its research. Therefore, a well-defined wish list for the new equipment was created and delivered to the tenderers, giving them a chance to develop the desired solutions.

Planmeca then developed a centralised, automatic waterline and suction tube cleaning system, which was implemented into the whole school. Thanks to the new system, there's no longer the need for manual cleaning of the around 200 units. According to technician **Finn Kammersgaard** and Manager of Working Environment **Erling Østergaard**, the centralised system has saved the school a great number of working hours. "We have calculated that it's really expensive to have employees doing the flushing of the 200 units every night. If one handling takes a minute, it's all in all 200 minutes, and if it takes two minutes, it means already 400 minutes. So 5 to 10 minutes of handling including some maintenance work requires several people!"

Another wish that the Department of Dentistry got fulfilled in connection with the renovation is a simulation environment that



has completely identical equipment with the treatment rooms. "Already early on we had decided that we wanted a simulation room with equipment functioning in the same way as in the clinic. It wouldn't make sense that the students would learn to use some equipment during the simulation phase and then end up with other equipment at the treatment clinic," Erling Østergaard says.

Technology supports teaching

The simulation clinic with its 20 integrated working stations has become an extremely popular teaching locality. According to **Flemming Kemner**, Senior Clinical Instructor in Dentistry, the simulation clinic is often fully booked for the whole day as several of the school's sections have noticed its benefits. The simulation clinic now houses different areas of teaching ranging from general dental diseases to periodontal diseases and surgery.

It's without doubt that the success of the simulation clinic derives from the underlying technology. The screens in all the simulation units are integrated, so that the same view can be shown in all the stations. Everybody can follow the treatment that the teacher is performing as there's an external video camera connected to the teacher's unit. An intraoral camera or an external computer can also be connected. Flemming tells how the equipment gives various possibilities for using live recordings and video sequences in teaching, bringing it to a whole new level technologically. "This setup even enables individual teaching. There are teaching

programs on the computers that allow the students to choose exactly the program that fits their current situation and progress stage. All one needs is a pair of headphones!"

Also Ellen Frandsen Lau is excited about the simulation clinic. According to her, it creates a good environment for the necessary clinical preparations for the procedures that will thereafter be carried out with real patients.

Safety with familiar equipment

The students use similar units during their whole education process. The control system in the simulation units is identical to that in the Planmeca units, which are placed in the treatment rooms. This gives the students a sense of security in treatment situations. "Just to meet the patient is a completely new kind of setting. So at least knowing the equipment makes it feel easier and safer. This is our philosophy," Flemming explains.

Another benefit in having the same units throughout the process is that it makes the teaching more efficient as it's quicker to assist everywhere. According to **Trine Hald Agerbæk**, Head of Clinic Assistants, it's now a lot easier for both the dentists and the clinic assistants to help out in another department as everything functions the same way and lies in the same places.

Interest from abroad

It's not only the employees and students of the Department of Dentistry who are excited about the modern facilities. According to Ellen and Erling, the school often receives visitors from foreign universities, looking for inspiration. They are also interested in building future-proof teaching environments that will support dental education in the best possible way. ■

