

# AniCura Quality Report *2016*



# Contents

<b>Preamble</b>	<b>5</b>
<b>Introduction</b>	<b>6</b>
<b>Quality development in real life</b>	<b>8</b>
<b>Shared resources for quality development in AniCura</b>	<b>10</b>
<b>QualiCura</b>	<b>14</b>
Encouraging professional development and specialisation	17
Creating and sharing medical best practice	18
Interest group deep-dives	20
Improving professional communication skills	24
Providing reliable diagnostic medicine	26
Monitoring surgical site infections	28
Ensuring wiser antimicrobial use	31
Securing infection prevention and control	32
Enabling good incident handling	34
Promoting patient medical record quality	37
<b>External controlling bodies</b>	<b>38</b>
<b>Clinical research in AniCura</b>	<b>40</b>
<b>About AniCura</b>	<b>42</b>



*"We hope to inspire the whole industry to further develop and to raise awareness around medical quality and veterinary care"*

PETER DAHLBERG,  
GROUP CEO, ANICURA



## Preamble

Dear Reader,

In your hand is AniCura's Quality Report for 2016 and currently the only quality report issued by a European veterinary care provider. Veterinary medicine is undergoing major changes, and this report highlights some of the recent findings within medical quality development and summarises AniCura's approach to quality.

AniCura's vision is to shape the future of veterinary care, together. By bringing several high quality veterinary clinics in Europe closer together, we can share knowledge, best practice and resources and jointly develop veterinary medicine in a manner not previously possible. To us, having a strong focus on medical quality and patient safety is key to improve outcome of treatments and decrease the risks for medical complications. By ensuring a high medical quality we maintain trust as well as ensure high customer and employee satisfaction.

Clinics that are part of AniCura have been carefully selected based on their level of medical quality and ambition, and have on average more than 20 years of experience of working with medical quality develop-

ment. Ever since AniCura was established in 2011, the medical quality work has been at the core of what we do and our development efforts have been systematised and intensified through best practice sharing, joint resources and an industry unique program to address some crucial aspects of quality throughout the company.

What is the purpose with this report and why is it being issued? To us, shaping the future of veterinary care, together, is a responsibility that goes beyond our own business. By openly sharing how we work to improve medical quality and patient safety and by publishing the results of our efforts and the challenges we face, we hope to inspire the whole industry to further develop and to raise awareness around medical quality and veterinary care.

I hope the report will give you some valuable insights into quality within veterinary medicine and inspiration for continued development.

PETER DAHLBERG  
GROUP CEO, ANICURA

# Introduction

AniCura is a European family of well-known veterinary clinics specialised in veterinary care for companion animals. The company was born out of the idea that sharing resources creates opportunities for better veterinary care, and AniCura was established in 2011 as the first merger of companion animal hospitals in the Nordic region. Today, AniCura is present in seven European countries and the company's 3 000 employees working in 150 clinics treat more than 1.5 million patients per year. AniCura has a strong position within advanced and specialised care and employs a high share of the industry's specialists. One third of all patients at AniCura are referred from veterinary clinics outside the company.

Medical quality development is at the heart of AniCura's business, and clinics that become part of AniCura have been subject to a rigorous selection process to ensure high medical quality and patient safety. AniCura's clinics are all dedicated to improve quality, and to support that development, AniCura has established a group wide medical quality program.

## ANICURA - A PIONEER

AniCura's pioneering program for systematic quality development, QualiCura, was launched in 2015, making 2016 the first full year with an operational program. During the year we have investigated and high-

lighted quality development and knowledge sharing opportunities in virtually all AniCura's clinics across different countries. Clinics participating in QualiCura in 2016 jointly treated more than one million patients, highlighting the reach of AniCura's comprehensive quality program.

In 2016, AniCura also witnessed how several of the common medical initiatives across education, knowledge sharing, clinical research, and overall collaboration significantly accelerated and grew in both scale and scope.

## BENEFITTING THE INDUSTRY AS A WHOLE

The purpose of the 2016 AniCura Quality Report is to openly share to our customers, employees, cooperation partners and other stakeholders how AniCura approaches medical quality and how we work with improving it in a systematic way. By openly sharing this report, we wish to inspire the rest of the industry and thus bring about medical quality improvements not only within AniCura, but in the European veterinary industry as a whole.



*"Clinics participating in QualiCura in 2016 jointly treated more than one million patients."*

# Quality development in real life

Quality improvement ideas need to transform into actual changes in our clinics, so that our patient interactions become safer and with better medical outcome each year. More than 1 000 quality improvement initiatives are implemented at AniCura's clinics each year. Throughout the report, you can read examples of specific quality improvement initiatives that took place in various AniCura clinics during 2016.

## QUALITY DEVELOPMENT IN REAL LIFE #1

"We designed and implemented a **new and improved way to present medical cases to colleagues** during rounds. The effects were faster handover to other departments and specialists, higher accuracy and relevance in the transmitted information and an overall faster way of making the correct diagnoses, and subsequently starting the adequate treatment faster."

"We implemented a strict regimen of using specific surgery checklists before and during all surgeries. This is supported by recent research showing that systematically **using surgery checklists decreases the complication rate**, which obviously creates higher patient safety."

"We started including CRP (C-reactive protein) analyses in the internal chemistry profile for dogs and SAA (Serum Amyloid A) analyses for cats. Both **tests give a quicker and more secure identification of inflammations**, enabling a timelier and more precise treatment regimen."

"We started an internship in diagnostic imaging, effectively increasing the competence in this increasingly important field by allowing an intern to follow a board-certified specialist during one year. **Patients will receive more correct and advanced level of image reading** as a consequence."



*"Our mission is to be Europe's leading provider of high quality companion animal care"*

PETER DAHLBERG  
GROUP CEO, ANICURA



# Shared resources for quality development in AniCura

The ability to work together and share resources and learnings across clinics and countries has been facilitated by the creation of veterinary groups operating across borders. Development of veterinary medical quality within AniCura through knowledge sharing and shared resources is a key theme, and something that makes AniCura unique.

Quality improvements are developed and implemented locally at each AniCura veterinary clinic. But to further support and give structure to the improvements AniCura has put considerable effort into providing shared resources and structures for quality development work across AniCura.

## MEDICAL INTEREST GROUPS

In addition to having dedicated central resources, AniCura works at its best when knowledge and experience is shared both within as well as across clinics and even countries. AniCura's Medical Interest Groups constitute one of the most important structures for bringing veterinary professionals across AniCura veterinary clinics together, and thereby accelerating the quality development within AniCura. Through the groups, veterinarians and nurses get in contact with each other and competence

development is stimulated and knowledge is shared, thus raising overall quality. Toward the end of 2016, AniCura had 18 active groups.

## THE 2016 QUALICURA REFERENCE GROUP:

AniCura's program for systematic quality improvements, QualiCura, includes recommendations to clinics on how to improve different aspects of medical quality and patient safety. To ensure that the surveys and proposed measures within the QualiCura program address the most important medical issues as well as that they can be put into practice at individual clinics, a QualiCura reference group has been involved in the quality development process.

**Titti Sjødahl-Essén**, DVM, Swedish specialist in Ophthalmology, Head veterinarian, AniCura Djursjukhuset Albano, Stockholm, Sweden

**Birgitte Grann Greve**, DVM, Veterinary Ophthalmologist, Head Veterinarian and Practice Manager AniCura Region Oslo, Norway

**Peter Masbøl Skov**, DVM, Danish specialist in Oncology, AniCura Odense Dyrehospital, Denmark.

In addition, a number of veterinarians and nurses from Germany, Austria and the Netherlands have provided valuable feedback during the year.

## ANICURA GROUP VETERINARY MEDICAL QUALITY AND DEVELOPMENT TEAM

To support and develop AniCura's overall collaboration efforts in quality, education, knowledge sharing and research, AniCura has dedicated resources working centrally to support the medical development in our clinics. The team is also responsible for designing and running the QualiCura program including quarterly QualiCura quality

surveys. This organisational set-up and central support team is unique within veterinary care. The 2016 team comprised:

**Anneli Bjöersdorff**, DVM, PhD, Group Laboratory Manager

**Kim Middeldorf**, DVM, Operations & Quality Manager

**Peter Feledy**, Group Care Services Director

**Stein Istre Thoresen**, DVM, PhD, Professor, Dipl ECVCP, Dipl ECVIM-CA, Group Medical Quality and Development Director

**Ulrika Grönlund**, DVM, PhD, Associate Professor, Group Medical Quality Manager

## QUALITY DEVELOPMENT IN REAL LIFE #2

"We encouraged the emergency and critical care team to start a journal club. We already had journal clubs for internal medicine as well as for surgery. Journal clubs are voluntary but also a very **efficient and hands-on way of accessing the latest research** in a field of interest together with colleagues, securing clinical applicability."

"One of our veterinarians went to Copenhagen to learn from a board-certified specialist in odontology. A very specific example of **creating opportunities for advanced learning** even when the mentor is in another country."

"We initiated a basic surgery training program for all the veterinarians, making sure that also the recently graduated veterinarians received a broad practical training in the most common surgical procedures. This **benefits the quality in many ways**, not only do all surgical patients receive a good level of treatment as every vet is trained, but the planning of emergency night shift staffing becomes much more flexible, putting less strain on the organisation and enabling the more experienced surgery specialists to focus on the more difficult cases."

### ANICURA'S VETERINARY DEVELOPMENT COUNCIL

The council, with members from all the regions in which AniCura has a presence, has as its primary task together with management to safeguard AniCura's overall priorities by keeping abreast of trends and general national and international developments in veterinary medicine, and making sure that AniCura's long term strategy meets these trends in a good way.

**Bente Akselsen**, DVM Specialist in small animal diseases MDNV, Practice Manager, AniCura Dyresykehuset Tromsø, Norway

**Birgitte Grann Greve**, DVM, Veterinary Ophthalmologist, Head Veterinarian and Practice Manager, AniCura Region Oslo, Norway

**Frank Höhner**, DVM, Practice Manager Kleintierorthopädie Wiesbaden, Germany

**Henrik Strange**, DVM, Specialist Veterinarian, AniCura Gistrup Dyrehospital, Denmark

**Marcel Reijers**, DVM, Practice Manager Diergeneeskundig Verwijscentrum in Dordrecht and Haaglanden, Netherlands

**Matilda Wallman**, Registered Veterinary Nurse, AniCura Norsholms Djursjukhus, Sweden

**Nanna Denneberg**, DVM, Specialist qualification in canine and feline oncology, Head Veterinarian, AniCura Djursjukhuset Jönköping, Sweden

**Stein Istre Thoresen**, DVM, PhD, Professor, Dipl ECVC, Dipl ECVIM-CA, AniCura Group Medical Quality and Development Director

**Anneli Bjöersdorff**, DVM, PhD, Group Laboratory Manager

**Peter Feledy**, Group Care Services Director

**Peter Dahlberg**, Chief Executive Officer

### ANICURA'S SCIENTIFIC COUNCIL

AniCura's Scientific Council promotes clinical research and makes the decisions regarding applications for the AniCura Scientific fund. The council also seeks to support evidence-based veterinary practice. During 2016, the scientific council was represented by members from Sweden, Norway, Denmark, Germany and Switzerland by people having extensive veterinary expertise and documented scientific merit.

**Anna Tidholm**, DVM, PhD, Dipl ECVIM-CA (cardiology), Associate Professor, AniCura Djursjukhuset Albano, Sweden (Chairperson)

**Anneli Bjöersdorff**, DVM, PhD, Group Laboratory Manager

**Barbara Kaser-Hotz**, DVM, Dipl ACVR, Dipl ECVI, Animal Oncology and Imaging Center, Zug, Switzerland

**Christina Strand Thomsen**, DVM, Dipl ECVS, AniCura Dyresykehuset Bergen Nord, Norway

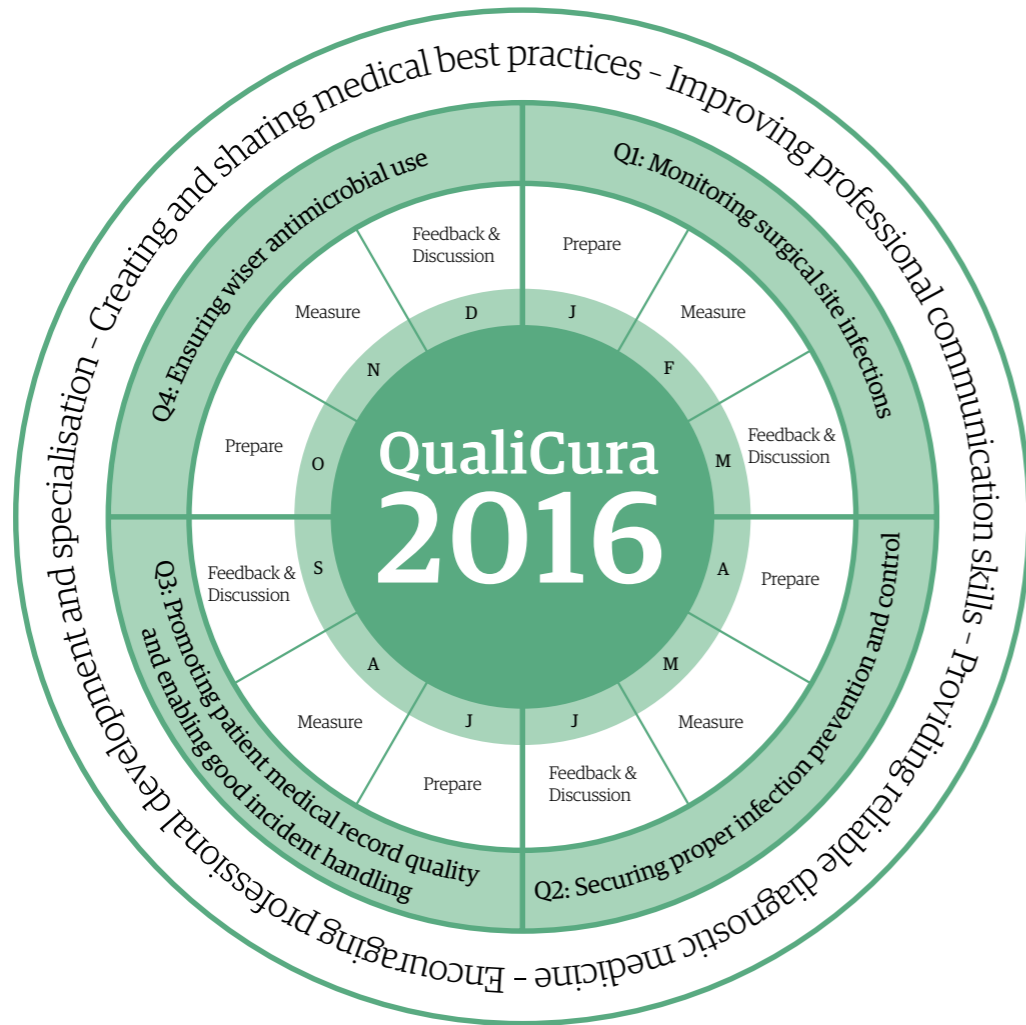
**Jens Häggström**, DVM, PhD, Dipl ECVIM, Professor of Internal Medicine, Small animals, Department of Clinical Sciences, SLU, Sweden

**Monika Linek**, DVM, Dipl ECVD, AniCura Tierärztliche Spezialisten Hamburg, Germany

**Steen Engermann**, DVM, Specialist Veterinarian in Oncology, AniCura Aarhus Dyrehospital, Denmark

**Stein Istre Thoresen**, DVM, PhD, Professor, Dipl ECVC, Dipl ECVIM-CA, AniCura Group Medical Quality and Development Director





# QualiCura

In 2015, AniCura established a group wide program named QualiCura to systematically help improve quality of veterinary care provided in AniCura's clinics across Europe. The aim of the program is to **"enable AniCura's patients to receive safer care, with better medical outcome"**. The program structures and supports quality development in AniCura's clinics by measuring and identifying relevant actions at each clinic.

The QualiCura program has identified nine focus areas which are believed to have a particular impact on patient safety and medical outcome:

- Encouraging professional development and specialisation
- Creating and sharing medical best practices
- Improving professional communications skills

- Providing reliable diagnostic medicine
- Ensuring wiser antimicrobial use
- Monitoring surgical site infections
- Securing proper infection prevention and control
- Enabling good incident handling
- Promoting patient medical record quality

To plan for activities in the clinics a yearly QualiCura-wheel was created. During 2016, QualiCura surveys were performed regarding surgical site infections in January-March, infection prevention and control in April-June, medical record quality and incident handling in July-September, and antimicrobial use in October-December.

## QUALITY DEVELOPMENT IN REAL LIFE #3

"We implemented a more specific education **support for veterinarians seeking specialist accreditation**. The support entailed journal clubs, specialist meetings as well as tutoring from more senior colleagues. This makes the specialist training more focused and efficient, while also ensuring a higher pass rate."

"Good hygiene and infection control are instrumental in minimising infections and complications in conjunction with treatments of our patients. We **changed the hand washing routine** used prior to surgery, now following the latest research in the field."

"We implemented an additional surgery service during daytime **enabling more emergency surgeries to be completed during daytime**. This creates faster turnaround time of the specific patients, as well as a decreased blocking of night time emergency surgery service."

"We invested in new ventilators in the operating theatre, enabling more secure anaesthesia during surgeries. **Correct anaesthesia is one of the most important areas** when it comes to patient safety."

"We invested in specialised ultrasound equipment enabling new cardiology examinations. Coupled with specific training on heart ultrasounds, the clinic significantly **increased diagnostic quality to the benefit of patients** with cardiac disease."

"We orchestrated a clinic-wide course incorporating the latest research findings around veterinary wound treatment. The clinic clearly observed **improved and faster wound healing** after the course."





## Encouraging professional development and specialisation

AniCura believes in continuing education as it is key to improve medical quality. Working in a veterinary clinic means constant on-the-job training through new cases, procedures, colleagues and own experiences. AniCura also encourages its employees to stay up-to-date through continuing education throughout the career, irrespective of position or responsibilities. In 2016, AniCura substantially increased its investments in education and training to enhance quality development even further.

### PROVIDING COMPLEMENTING EDUCATION

Sometimes, the need for specific courses and educations can be greater than what the market offers. In these circumstances, AniCura organises tailored courses to accelerate learning in certain prioritised areas. In addition, there are many local courses arranged in our various clinics. AniCura's medical interest groups also arrange courses and seminars when considered needed.

AniCura tries to put special emphasis on courses and education for nurses, as they are sometimes overlooked by other course providers. During 2016, AniCura organised about 30 different courses around Europe.

### CONTINUED SPECIALISATION AHEAD

Veterinary medicine is becoming increasingly specialised and a relatively high share of AniCura's veterinary professionals pursue or hold some kind of specialisation. AniCura actively encourages this development as we believe it has positive effects for both the individual as well as for the collective knowledge within the company. Approximately 200 out of 900 veterinarians employed by AniCura by the end of 2016 are specialised within different medical fields. More than 50 are board certified specialists (Diplomates), meaning that AniCura, compared to other veterinary care companies, has a high number and share of board certified companion animal specialists employed.

The number of board certified specialists in the group has increased by 50% compared to 2015, and the majority of this growth has come from specialists starting working in AniCura clinics and dedicated people in training passing their board exams. More than 40 of AniCura's clinics are accredited as teaching institutions for various European or country-specific specialisation tracks.

*"Training and continuing education are key for AniCura's aspiration to grow, develop and improve"*

PETER FELEDY  
GROUP CARE SERVICES DIRECTOR





## Creating and sharing medical best practices

All serious veterinary clinicians want to make medical decisions based on current best evidence to ensure patient safety and better medical outcome. In AniCura research results and systematic reviews are available through the EBSCO Discovery Service® (EDS) and MEDLINE Complete®. Scientific research and veterinary medicine updates are regularly discussed in local “journal clubs”. Knowledge is also shared by specialists and general practitioners throughout AniCura through “Best practices” in the online Knowledge Base on AniCura’s Intranet. A significant contribution to knowledge sharing is also made through AniCura’s Medical Interest Groups.

### GROWING MEDICAL INTEREST GROUPS

The Medical Interest Groups provide networking and knowledge sharing possibilities within various medical fields. The groups are led by one or more persons with

deep knowledge in a certain medical field coupled with an ambition to share and disseminate knowledge in the wider AniCura community. Any employee may join one or several interest groups to discuss cases and develop further.

### DIFFERING DISCIPLINES SHOW DIFFERING NEEDS

Different disciplines have various needs, therefore the work and function of the interest groups varies slightly and the different groups use a variety of communication and knowledge sharing tools.

During 2016 six new medical interest groups were formed bringing the total to 18 active groups. The interest groups are rapidly gaining interest and constitute a treasured resource for AniCura staff. In December 2016, more than 400 of AniCura’s employees were (on average) members of 2,4 medical interest groups each. New groups are being formed continuously.

### QUALITY DEVELOPMENT IN REAL LIFE #4

“We increased the care nurse service, enabling patients returning on check-ups and wound care to receive more care and better follow-up.”

“We installed a new telephone system with call-back functionality, enabling a **quicker average response rate**, as well as decreasing the need to disrupt ongoing patient treatment to handle the phone calls.”

“We implemented a thorough dental cleaning and evaluation procedure prior to doing dental extractions. This **increases the hygiene in the oral cavity**, as well as enables a more exact planning of the time needed for the specific extraction. This benefits the specific patients as well as decreases overall average waiting times.”

“We implemented the usage of an always-ready emergency bag, containing **life-saving equipment and medications** in correct doses enabling immediate use when critical emergency patients come to the clinic.”

“We decided to move the feline in-patient care ward from the surgery preparation area to another room to achieve **improved hygiene as well as a better patient environment** for our hospitalised cats.”

“We have initiated regional cooperation meetings to **improve clinical handover communication** when patients move between clinics.”

“We improved the follow-up of surgery patients by **checking for potential surgical site infections.**”

# Interest group deep-dives



**Hege Jøntvedt Engum**, 2016 chairperson of Medical Interest Group Ophthalmology.

## Who are you and what do you do?

My name is Hege Jøntvedt Engum. I work at AniCura Stjørdal Dyreklinikk in Norway. I have been a certified eye examiner and member of the Norwegian Panel of Veterinary Ophthalmologists (NSVO) since 1998.

Me and my husband started Stjørdal Dyreklinikk in 1992. We are now 6 veterinarians and 8 nurses working in the clinic. We joined AniCura in 2015.

## How many in AniCura have shown interest and joined the Medical Interest Group in Ophthalmology?

The group has been contacted by 60 persons interested in the field. The members are from almost all AniCura countries.

## When did the group start?

It was started 2014 by a group of AniCura ophthalmologists.

## What did your interest group do during 2016?

As we want to share our knowledge with the rest of the veterinarians at AniCura, we wrote 7 new best practice documents together. They are now found on the AniCura intranet for everyone to read and use. The documents are dealing with Horner syndrome, Proptosis of the globe, Acute blindness, Glaucoma, Conjunctival pedicle graft, Keratoconjunctivitis sicca, and Follicular conjunctivitis. We published two quizzes on the intranet. They concerned indolent corneal ulcer (also known as Boxer ulcer and spontaneous chronic corneal epithelial defect (SCCED) and the cause of blindness.

We also arranged our yearly AniCura eye meeting where we presented cases to each other and discussed how to further share knowledge with our colleagues in AniCura.

All along we also discuss and communicate via our intranet chat forum.

## What do you think is the most interesting development in your medical field right now?

Difficult question. But for me as a cataract surgeon since 2001, the development of phaco surgery equipment with amazing technical improvement is fantastic. The investment during 2016 was made in the latest model "Infinity".



**Josefine Öberg**, 2016 chairperson of Medical Interest Group Laboratory Medicine

## Tell us about yourself!

My name is Josefine Öberg and I am a veterinarian, specialised in clinical pathology (dipl ECVCP). I am working as a laboratory manager at AniCura Bagarmossen Laboratory. When I don't work, I like to spend my time with my daughters, friends, my dogs and my two horses.

## What about the interest group? What are you doing in the group?

In the interest group, that started already 2014, we are 33 members (biomedical scientists, veterinarians and nurses) representing all "AniCura countries".

During 2016 we as a group sent out laboratory quizzes to all clinics in AniCura. Also we had our annual meeting with discussions and some lectures. We are communicating with each other through mail, our online discussion forum and through the intranet sharing learnings and helping each other with difficult cases.

## What do you think is the most interesting development in your medical field at your hospital right now?

I am very pleased and happy to be able to run the analyses for the major acute phase proteins, CRP and SAA with a satisfactory quality.

## And within AniCura?

I think it is very important and good that we discuss and continue discussing quality and how we can improve quality in our different laboratories.

**Jens Ruhnau**, 2016 chairperson of AniCura's Medical Interest Group in Odontology (Dentistry)

**Who are you?**

*My name is Jens Ruhnau and I am a European board certified specialist (diplomate) in animal dentistry.*

**Tell us about the AniCura interest group in dentistry!**

*The MIG Dentistry started as a Facebook group in March 2015 and had almost 100 members from all AniCura countries. We have recently moved the group to AniCura's Yammer platform, and the group continues to grow. (The Yammer group is used for discussion of specific cases and knowledge sharing.)*

*On top of this, AniCura arranges various Odontology courses. In 2017 we will have Odontology 1, 2 and 3. The courses include both theory and practicals.*

**What are you mainly focusing on now?**

*We are working on training interested veterinary den-*



*tists to see and find oral pathology. One of the large topics now are resorptive lesions in dogs. As always periodontology is a major topic in veterinary dentistry and we try to raise the awareness in this field among all AniCura Clinics.*

**Erik Wouters**, 2016 chairperson of AniCura Medical Interest Group Surgery and Orthopaedics

**Who are you?**

*My name is Erik Wouters and I am a certified European specialist in small animal surgery and a Diplomate of European College of Veterinary Surgeons. I work at two different hospitals; AniCura Diergeneeskundig Verwijscentrum Dordrecht and AniCura Specialistisch Verwijscentrum Haaglanden. I mostly do surgery but also have many educational commitments. I am also a*



*member of the Quality Committee of the Dutch Veterinary Society giving directions to the National Veterinary Board in quality issues.*

**Tell us about the MIG Surgery and orthopaedics?**

*The Group started 2013 and there are currently 94 members from all AniCura countries and nearly 200 of AniCura's personnel have registered as interested of surgery. During 2016 we arranged an AniCura Surgery congress in Copenhagen. Several specialists from AniCura hospitals gave lectures and seminars and the event was very appreciated by the 35 surgeons attending. We also publish a "Case of the month" on the intranet, share cases on AniCura's social communications platform, Yammer and publish several "Best practices" in the AniCura Knowledge Base.*

*For 2017 we are planning to share our knowledge through cases, seminars, courses and wet labs.*

**What do you think is the most interesting development in your medical field right now?**

*To mention only one is difficult as so many new things are developing! One interesting trend is that more and more "minimal invasive surgery" is being performed in orthopedic, soft tissue and neuro surgery.*





# Improving professional communication skills

Good professional communication in a medical setting is a quality enabler directly linked to patient safety. It secures correct information about the pet's condition to the veterinarian, as well as correct information regarding treatment compliance to the pet owner. Good communication skills are also essential when conveying bad news.

## AN INCREASINGLY IMPORTANT MATTER

The field of doctor-patient communication is a growing field of research in human healthcare, and this field is increasingly gaining ground also in veterinary care. AniCura initiated a Professional Communication Project in 2015 which in 2016 was transformed into an ongoing communication approach supported by tailored trainings in the clinics.

## TRAINING AND ROLE PLAY NEEDED

To improve professional communication skills AniCura offers seminars where all categories of clinical staff involved in client communication participate in a mixed group. The seminars consist of lectures and practical training sessions where the participants assume different roles.

During 2016, professional communication seminars were organised with more than 140 participants from 26 AniCura clinics in Norway, Denmark, Germany, and Sweden. Seminar participants were veterinarians, nurses and receptionists.

## QUALITY DEVELOPMENT IN REAL LIFE #5

"We decided to more rigorously monitor the patient temperatures prior, during and after surgery, as this has an **impact on susceptibility of infection development.**"

"We decided to **stop performing certain orthopaedic procedures** as our yearly caseload of the procedures was deemed too low to maintain a sufficient and up-to-date quality level."

"We changed the routines for post-surgery wound treatment. The routines now entail **using a new kind of sterile compress.**"

"We identified improvement potential in the prophylactic antimicrobial treatment in conjunction with surgery. The correct choice of antimicrobial substances will improve treatment effectiveness while also **reducing risk of developing antimicrobial resistant bacteria.**"

"We upgraded our equipment for infection prevention and control by installing **dispensers of hand disinfectant in all treatment rooms.**"

"We work extensively with taking care of stray cats. These cats have an increased risk of being carriers of various infectious agents. We therefore invested in a separate examination and treatment station for these specific patients, thus **minimising the risk of spreading infections to other patients.**"

# Providing reliable diagnostic medicine

Diagnostic medical procedures provide an increasingly important tool for veterinarians of today, which means that the diagnostics performed need to be reliable and quality assured. The diagnostic findings together with patient history told by the pet owner and the clinical examination by the veterinarian often make it possible to reach the correct diagnosis already during the first consultation, as more and more diagnostics are possible to perform in-house. Plans for treatment and follow up can be set accordingly. Pet owners are increasingly interested and want detailed information about the health of their pets, which increases the need for clear communication about diagnostic results.

## ADVANCED IMAGING NEEDS CORRECT INTERPRETATION

For diagnostic imaging encompassing radiography (X-ray), ultrasonography, computed tomography (CT), magnetic resonance imaging (MRI) and nuclear medicine (scintigraphy, SPECT, PET) there is strict national legislation for technical quality and radiation safety. For veterinary medical imaging quality on the other hand, there are no mandatory requirements in the general market. Within AniCura, we typically have radiology specialists supporting imaging diagnostics either in the clinics, or via collaboration with specialists in other clinics or companies.

## MORE THAN THE MACHINE

Upgrades of old imaging machines to more powerful and faster, benefit both the diagnostic image quality and the patient safety. Modern and faster instruments mean shorter anaesthesia, which in turn decreases the risk for the patient. During 2016, new and upgrade investments in diagnostic imaging equipment were made in about 15 AniCura clinics. The company has

more than 30 clinics with CT equipment and 13 clinics with MRI equipment. As this equipment alone does not bring about good quality medicine, AniCura clinics provide continuing education for employees working with imaging as this is key in securing high level diagnostic procedures.

## LABORATORY MEDICINE PROVIDES ESSENTIAL INFORMATION

Most AniCura veterinary clinics have in-house medical laboratories for blood and urine samples, providing speed and convenience. Sometimes more unusual diseases and conditions require laboratory analyses to be performed at international reference laboratories. In AniCura clinics automatic laboratory instruments are regularly checked by quality control and maintenance procedures. Some AniCura laboratories with larger non-automatic instruments (e.g., Sysmex 2000, Roche Cobas c311, c111, Siemens Immulite 1000, 2000, Siemens 2120i or Siemens 1800) also participate in international external quality assurance programs. For endocrinology quality, the ESVE quality control program is employed. Performances in clinical chemistry, haematology and bacteriology are controlled in the Veterinary Laboratory Association quality assurance program. With regular quality controls incorrect performance of instruments can be immediately detected and corrected.

To be reliable, diagnostic medicine not only requires quality controls and checked processes. It is most essential that the laboratory personnel and the clinicians know how to use and evaluate the test results. Therefore continuing education is provided by internal laboratory competence development courses as well as external courses to all dedicated personnel involved in laboratory diagnostics within AniCura.



*"Laboratory diagnostics is a rapidly growing field. We need to make sure new possibilities are implemented with high quality and reliability"*

ANNELI BJÖERSDORFF  
GROUP LABORATORY MANAGER

## QUALITY DEVELOPMENT IN REAL LIFE #6

"We invested in a state-of-the-art emergency cage with oxygen. This equipment enables **treatment and monitoring of critical patients** requiring the correct level of oxygenation."

"We introduced a **surgical safety checklist** covering the most important points during the procedure."

"We implemented a system where all new employees had to go through a number of trainings and on-the-job-learning modules, signing off the received knowledge. This benefits the patient safety greatly, as all staff have a common understanding of the basic procedures in place in the clinic, **minimising the risk of errors and confusion.**"

"We implemented a new client communication e-mail prior to all planned surgeries. The document highlighted the most common questions, making sure that the **patient owners were as prepared as possible**, enabling a more specific discussion once in the examination room."

"We implemented an incident handling system, making sure that subsequent **incidents were turned into systematic learning and improvement opportunities** and minimising the risk of the same incident recurring."

# Monitoring surgical site infections

Surgical site infection (SSI) is a severe complication after surgery causing patient suffering, frustration for pet owners and members of staff, as well as unnecessary costs. This kind of complication can be prevented through improved infection control and surgical skills. To have progress and improvement in surgical quality and thereby increase patient safety, hospitals in both human and veterinary health care must actively survey their surgery patients, i.e. surgical patients have to be checked after discharge from the hospitals. This means that hospitals have to contact the patients or the animal owner after surgery and record the outcome. Otherwise they will not be able to address complications like SSI because the estimated number of unknown cases will be high. After gathering outcome data, preventive measure can be investigated and routines can be improved for better patient outcome. Antimicrobial prophylaxis (AMP) is an important pre-

ventive measure of SSI in certain surgical procedures, for instance when the patient is in bad condition, if the surgery duration is long or in sites where an infection would be disastrous for the patient.

## The major findings in this year's QualiCura survey on surgical site infections were:

- AniCura has a surgical site infection rate at a similar level as described in the literature. Nevertheless, for the individual patient we have to strive for a decrease.
- In AniCura, the timing of antimicrobial prophylaxis in relation to start of surgical procedure and choice of substance were according to international guidelines. However, to bring about a decrease of post-surgical use of AMP is essential.
- Better compliance to sampling of SSIs for bacteriology analyses is important.

## STUDY DESIGN AND MORE DETAILED RESULTS:

- This QualiCura study on Surgical Site Infections (SSI) was conducted during the beginning of 2016. Each hospital was requested to monitor 20 consecutive dogs undergoing surgery. For each patient a number of variables were recorded regarding surgery type, patient condition, antimicrobial prophylaxis (timing and substance), duration of surgery and anaesthesia. Thereafter, each patient in the survey was checked on two occasions after surgery. Variables associated with the patient's wound condition were then recorded.
- 42 of AniCura's clinics participated; 7 in Germany, 2 in Austria, 4 in Denmark, 12 in Norway and 17 in Sweden. This gave a clinic response rate of 72%. In total, 849 dogs had a proper follow-up.
- Exuding wounds are a strong indication of infection and exudate (fluid from inflamed wound tissue) was recorded in 60 dogs, which gives us a SSI rate of 7%. Figures presented in research literature, where all surgical procedures are included, vary from 3.0 to 5.1%<sup>1</sup>. The slightly higher rate in our study can be explained by the inclusion criteria we used for SSI. In AniCura's 7% all exuding wounds were included as SSI, not - as in the literature - only those with purulent discharge.
- Out of 60 dogs with exuding wounds, only wounds in 12 dogs were sampled for bacteriology analyses. *Staphylococcus pseud-intermedius* was isolated from one third of the wounds.
- Moreover, AMP was given to 41% of the 849 dogs of which in turn 67% received AMP at the correct time before incision<sup>2</sup>. However, 61% of the patients receiving AMP did so for longer than 24 h post-surgery. There is scarce evidence that antimicrobial treatment administered after surgery reduces the risk of SSI. Further research on the impact of AMP on surgical outcome will be performed on this unique data set through statistical analyses.
- The overall survey results together with individual clinic results were communicated back to the clinics together with a number of suggestions and discussion starters on how to improve. The participants were requested to analyse different angles of their surgical routines and suggest an improvement plan tailored for their specific clinic.

“Active follow-up of surgery patients is an important tool for decreasing surgical site infections”

ULRIKA GRÖNLUND

ANICURA GROUP MEDICAL QUALITY MANAGER

<sup>1</sup>Verwilghen D, Singh A. Fighting surgical site infections in small animals: are we getting anywhere? *Vet Clin North Am Small Anim Pract.* 2015 Mar;45(2):243-76.

<sup>2</sup>Bratzler DW, Hunt DR. The surgical infection prevention and surgical care improvement projects: national initiatives to improve outcomes for patients having surgery. *Clin Infect Dis* 2006;43(3):322-30.





# Ensuring wiser antimicrobial use

Antibiotics are one of the world's most life-saving innovations, and thus completely essential for both veterinary and human medicine in treating bacterial infections. Some bacteria however, are developing resistance to antibiotics, threatening the efficiency of these important drugs. The more they are used, the more resistant bacteria are favoured. As there are no new antibiotics in the pipeline, everyone in the health care sector has to use the available antimicrobial drugs wisely, and give the correct substance for the right indication with accurate dose and dosing interval. In addition, unnecessary use has to be minimised.

Addressing the issues with resistant bacteria is one of the most urgent priorities in the field of public health and AniCura takes its responsibility for both patients and society. AniCura has consequently put extra attention to best practice regarding antimicrobial treatments.

In order to improve antibiotic use within AniCura, a survey was conducted within the QualiCura program. AniCura clinics recorded during one day what antimicrobial substance they used in dogs for systemic treatment or prophylaxis together with indication for this use.

**The major findings in this QualiCura survey on antimicrobial use were:**

- Difference in prescribing behaviour among countries that needs to be addressed.
- The number of antibiotic treatments for wound infections and gastro-intestinal disorders should decrease.
- The strategy of every antibiotic treatment must be thought through resulting in a more accurate substance choice.

## STUDY DESIGN AND MORE DETAILED RESULTS:



- This QualiCura study on antibiotics was conducted towards the end of 2016. In total, 59 AniCura clinics participated in the survey, which equalled a response rate of 82%. Of the 1 902 dogs reported to have been visiting the clinics during the measured day, 273 dogs received antibiotics, which equals 14%. The incidence of antibiotic use varied among clinics from 0 dogs treated to 38% of the canine patients. In addition, the mean incidence per country differed from 10 to 24%.
- Surgical prophylaxis was the most common indication for dogs receiving antibiotics (22%) followed by wound infection including abscesses (18%), gastro-intestinal disorders (13%), skin infections (dermatitis, furunculosis etc.) (7%) and urinary tract infections (6%).
- The most commonly used antimicrobial class was beta-lactam antibiotics (70%). Most of the dogs were treated empirically, i.e. without any diagnostic aid like bacteriology and/or cytology results. Duration of treatment varied from 1 to 42 days with a median of 7 days.
- Results from the survey including individual clinic results were communicated to the clinics together with suggestions on how to improve. Veterinarians are encouraged to discuss their antibiotic prescribing behaviour with their colleagues.
- Data on which antibiotics veterinarians use for what indication and with what kind of diagnostic aid are scarce. The QualiCura survey results therefore serve as a unique research base to further analyse the antimicrobial prescribing behaviour among veterinarians.



# Securing infection prevention and control

According to the World Health Organization (WHO)<sup>1</sup>, clean hands are the single most important measure to minimise spread of micro-organisms including antimicrobial resistant bacteria. To use alcohol-based sanitiser is very easy but still compliance to routines is low even in human health-care and they have been working with this issue since the 1950's<sup>2</sup>. Therefore, hand hygiene improvement activities are needed. Data on consumption of alcohol-based hand sanitiser is considered to be an effective action to get increased compliance provided that the results are discussed with staff. Measurements of compliance can be done in two ways; directly or indirectly. Direct measurement includes observations where the accuracy of the actual procedure when staff are using alcohol-based hand sanitiser is investigated together with the correctness of timing. These actions are registered by an observer or by video camera. In the indirect method the amount of alcohol-based hand sanitiser consumption is measured during a certain time period together with the number of patient days.

During 2016, AniCura's Infection Control Program was distributed to all clinics and also published in English, Dutch and Swedish on AniCura's Intranet. A German translation will be finished in first half of 2017. The program describes what hygienic measures should be undertaken in AniCura clinics to minimise spread of micro-organisms between patients, as well as between patient and staff. Infection control is essential for improving both patient safety and staff working environment.

The major findings in this survey about alcohol-based hand sanitiser use were:

- Improvement opportunities exist to use more alcohol-based hand sanitiser.
- AniCura's Infection Control Program should be studied carefully and discussed with all staff members. It describes how and when personnel should clean their hands when working with patients.

## QUALITY DEVELOPMENT IN REAL LIFE #7

"We conducted a stress management course. Work in a highly specialised emergency clinic can be stressful. Life and death decisions need to be made and re-evaluated constantly. The course participants became more **secure in their on-the-spot prioritisation skills**, with improved patient triage and better medical outcome as a result."

"We implemented a more **structured training program for new employees**, ensuring that all have the same level of basic understanding when running the clinic."

"We started doing more surveys in the clinic focusing on, e.g., antibiotics usage, enabling us to have a **more exact antimicrobial treatment regimen**, minimising unnecessary resistance creation."

"We felt that the hygiene in the kennels was not good enough. (Microbial testing had been monitored for years). After some education a new process was started where each nurse had to **document all hygiene work with date, name and procedure performed**. The experienced improvement was significant and shows how important creating responsibility among the employees really is in order to achieve real change."

"We introduced laminated checklists for the daily tasks to be performed in the ward. This improved the running of the ward with **more orderliness as well as well as more time with the patients**."

"We defined minimum stock levels for pharmaceuticals in our in-house pharmacy and introduced Kanban-style replenishment cards **making sure we always would have the right medications in stock**, but without running the risk of having to discard expired pharmaceuticals."

"We implemented a **standard operating protocol for hygiene procedures** after having seen a patient with acute diarrhoea/vomiting. This includes immediate blocking of the affected area and starting with meticulous cleaning and disinfection according to the protocol right away."

"We jointly discussed a new paper about **antibiotic use in patients with acute diarrhoea** with our veterinarians. Then we implemented changes to the treatment plans for these patients."

"We implemented **monitors with capnometry in all anaesthesia workstations**, to increase patient safety during anaesthesia."



## STUDY DESIGN AND MORE DETAILED RESULTS:

- This QualiCura study on infection prevention and control was conducted during 2016. The clinics measured the consumption of alcohol-based hand sanitiser during a fortnight together with the number of patient days during the same time period.
- In this survey, 33 AniCura clinics participated (4 Danish, 4 German, 12 Norwegian and 13 Swedish), which equalled a response rate of 72%. On average, the participating clinics consumed 14 ml of hand sanitiser per patient day, which indicates an improvement opportunity. Survey findings exhibited large differences in hand sanitiser use across the clinics, both due to differences in care services offered, as well as actual compliance in the clinic. It is difficult to establish an exact target due to the limited availability of data in veterinary medicine literature. Moreover, surveys in human healthcare generally only include hospitalised patients. AniCura's aim for 2017, however, is an increase of consumption in all clinics and a >50% increase of the group's average. AniCura's long-term goal is to be above 30 ml of hand sanitiser per patient day on average.
- The overall survey findings as well as individual clinic results were communicated to the clinics together with suggestions on how to improve. They were encouraged to look into and discuss in which situations they had most difficulties to do proper hand hygiene compliant to the Infection Control Program, which was also distributed to the participating clinics.

<sup>1</sup>WHO guidelines on hand hygiene in health care 2009. WHO [http://apps.who.int/iris/bitstream/10665/44102/1/9789241597906\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44102/1/9789241597906_eng.pdf)

<sup>2</sup>Lytsy B, Melbarde-Kelmere A, Hambræus A, Liubimova A, Aspevall O. A joint, multilateral approach to improve compliance with hand hygiene in 4 countries within the Baltic region using the World Health Organization's SAVE LIVES: Clean Your Hands model. *Am J Infect Control*. 2016 Nov 1;44(11):1208-1213





# Enabling good incident handling

Animal hospitals are complex operational environments established to perform high quality medical services. To achieve this, a lot of different capabilities and expertise must cooperate in a timely manner and all routines must run smoothly to accomplish the best medical result for the patient and their owners. Nevertheless, unexpected and undesirable events might happen. When such an undesirable event takes place, routines for handling the incident to minimise damage must be available and activated in due time. Unexpected events could be non-critical, for instance non-essential devices not working, or potentially life threatening situations as for instance unexpected development of a medical procedure.

An incident handling procedure is a tool for increasing the quality of important routines in the clinic, resulting in improved patient safety. The overall aim is to improve the general performance and reduce the need for "firefighting" by applying root-cause-analysis after undesirable events are experienced. Thereby, the risk of recurrence of the same incident can be minimised in a systematic yet efficient way.

## STEP BY STEP PROCEDURE

The incident handling process comprises a sequence of steps that begin when an incident reaches the staff and ends with implementing corrective actions, if considered needed. A good incident handling report template is an important tool in making sure the correct questions are asked and answered during the incident handling procedure, as well as for documentation.

The procedure of incident handling is in no way intended to assign blame on individual persons or

functions, but rather to identify systematic ways of avoiding incident recurrence. AniCura's strong culture and values prove an important enabler for these honest and open discussions.

The major findings from the 2016 QualiCura survey covering incident handling were:

- 45 % of all AniCura clinics had established processes for incident handling.
- Large variations between countries, with Norway representing the country with the highest share of clinics having established incident handling procedures followed by Sweden, Germany, Netherlands and Denmark.
- Out of the clinics having an incident handling procedure in place, about 20% handled no incidents during the first 6 months of 2016, 40% handled 1-3 incidents; 30% handled 4-10 incidents and 10% handled more than 10 incidents.

After the survey was completed and results obtained, a suggestion for an incident handling procedure including relevant documents and an example template for reporting incidents was distributed to all AniCura clinics. The purpose of this was to support the clinics not yet having established such a procedure and provide an alternative to consider for clinics already having an incident handling procedure running. AniCura's aim is that all AniCura clinics should have an established method for incident handling.

## QUALITY DEVELOPMENT IN REAL LIFE #7

"We provided an internal **course on our different anaesthesia machines and monitoring methods** for our staff (both nurses and vets) with the goal of increasing patient safety."

"We started using a plexiglass box **enabling CT scans of cats and other smaller animals without anaesthesia** (for patients with augmented anaesthesia risk)."

"We **improved our patient warming procedure during anaesthesia** using vacuum mattress + isolation blanket. Allowing patient temperature to drop too much during surgery increases complication risk."

"We changed our SOP for quarantine patients. Patients that are even slightly suspicious of having infectious disease are **isolated right away to protect the rest of the patients** in the regular wards."

"We got a **better CT machine**. This means better diagnostics (higher image quality), shorter examination time including shorter time under anaesthesia, as well as less radiation exposure."

"We implemented a new rounds system with veterinarians from all departments present. This **improved patient safety in terms of patient handover**, as well as providing a good knowledge sharing opportunity."

"We institutionalised weekly medical meetings with time devoted for **case discussions and individuals sharing learnings** from courses to their colleagues in a structured way."



## Promoting patient medical record quality

Medical record writing generally differs in content and complexity between AniCura clinics due to different types of clinical practices. Some are mainly “first-line practices”, some are “referral practices” and many are both. Regardless of patient, the medical records have to be proper and accurate to ensure patient safety and reduce medical errors. Each patient’s medical record is of fundamental importance as we work in teams but also refer patients to other colleagues when considered beneficial to the patient. The medical record is also very important for the communication between the hospital and the pet owner. Hence, the written information and documentation available in the patient medical record is crucial. During 2016, QualiCura put special focus on patient medical record quality.

The major findings from the 2016 QualiCura survey covering patient medical record quality were:

- 86% of the surveyed clinics reported to have their own, specific guidelines for medical record writing.
- Patient medical records were regularly peer-reviewed and discussed at staff meetings to assess medical content and quality in about half of the AniCura clinics. In the other clinics, such discussions were scheduled when considered appropriate.
- Virtually all clinics reported that standards and expectations of patient medical record quality were clearly defined and communicated to the medical staff.

### DISCUSSIONS ESSENTIAL

After the QualiCura survey results were evaluated, the importance of patient medical record quality was communicated to all clinics in AniCura. To identify and disseminate best practice around patient medical records within the hospital we encourage all medical staff to discuss medical record writing and perform regular peer reviews of records at staff meetings.

### 16 000 MEDICAL RECORDS REVIEWED

In a separate Norwegian initiative, around 20 AniCura clinics in Norway embarked on a nationwide campaign to improve patient medical record quality as well as ensure that the services provided were in accordance with what the customers had paid for. More than 16 000 medical records were reviewed retrospectively, and between 10-15% of the records showed room for improvement from a medical perspective. By jointly reviewing and measuring what share of records that retrospectively showed room for improvement, is a great way of finding ways to improve the quality of future medical records. The approach will be shared to other clinics in AniCura.

*“A well structured and timely patient medical record is fundamental when solving the medical challenges each patient presents”*

STEIN ISTRE THORESEN  
GROUP MEDICAL QUALITY AND  
DEVELOPMENT DIRECTOR

# External controlling bodies

The veterinary medicine field in which AniCura operates is governed and controlled by various external and governmental bodies. These structures are different in each country, with varying operating models.

AniCura sees great benefit in external bodies, and cooperates with these in all countries, e.g., Ansvarsnämnden (Sweden), Rettsrådet (Norway), Forbrugerklagenævnet (Denmark), the BPT and various veterinary chamber bodies (Germany, Austria, Switzerland) and VTC (the Netherlands). Moreover, some clinics work with various quality management systems (e.g., ISO, GVP, etc.)

Most of the above bodies do not disclose rulings publicly, but in Sweden they do. During 2016, Ansvarsnämnden in Sweden made a total of 121 actual rulings of which one involved revoking a license, one issuing a warning, 25 giving an admonition ("Erinran") and 93 cases being acquitted.

No veterinary professionals in AniCura had their license revoked nor did any AniCura veterinary professional receive a warning. In four rulings, veterinary professionals from AniCura received admonitions. Measures have been implemented to minimise the risk of the incidents occurring again.

## QUALITY DEVELOPMENT IN REAL LIFE #8

"We implemented clearer structures and times for calling back to pet owners with test results, **making sure no calls were missed.**"

"We implemented a clearer treatment protocol challenging our veterinarians that prescribed antibiotics to answer four questions in the medical record - why did they prescribe antibiotics? What infectious agent did they suspect? Which specific antibiotic did they prescribe and why? This has **increased the quality as well as decreased the antibiotics usage.**"

"We implemented medical record templates in conjunction with courses for medical record writing. Moreover, **medical records were regularly followed up and discussed with the team.** The medical record is the most central tool in all veterinary treatment, and having well-written records containing all the relevant information to the patient's case, while omitting everything else, is key."

"We installed a camera in the surgical theatre, **enabling colleagues to follow ongoing surgeries in real-time,** as well as recording surgery procedures to be used in sub-sequent training of staff."





# Clinical research in AniCura

Clinical research in veterinary medicine is today characterised by both new challenges and new opportunities compared to only a few years ago. Among the challenges are more strict and complex regulations, administration of compulsory informed consent agreements, funding and inclusion of sufficient number of patients in each study. However, the possibilities for better communication and cooperation among clinicians with research interests in veterinary hospitals and research departments in universities, has improved significantly. Hence, the access to relevant and high number of patients needed for high quality and relevant research has increased. Higher quality of patient data (patient medical records) and the request from pet owners for more advanced treatments of their pets when they become ill, also contributes to better clinical research in companion animal veterinary medicine.

## ANICURA RESEARCH FUND

AniCura strives for evidence based medicine and practice, and strongly encourages all medical staff to advance the research-based knowledge within companion animal veterinary clinical medicine. AniCura has many dedicated employees who devote time and effort to conduct clinical research alongside their other duties. As at December 2016, more than 70 employees had experience from clinical research and the total number of published peer-reviewed scientific articles by AniCura employees is now above 500.

In 2015, AniCura decided together with three of its owners (Nordic Capital, Fidelio Capital and the Animal Hospital Foundation in Greater Stockholm) to start the AniCura Research Fund to facilitate clinical research by AniCura employees.

The scientific screening and ultimate decision on which research projects to fund lie within the responsibility of AniCura's Scientific Council. The council reviews and approves applications for financial support. Only projects of high scientific research standards with potential of publishing the findings in scientific journals will be granted funds.

## RESEARCH COOPERATION

In the continuous striving for better clinical outcome for our patients, AniCura early on recognised the importance of clinical research and networking. Therefore, AniCura was one of the co-founders of CARENet, Clinical Animal Research Network. It is a network of researchers and animal health professionals with a special interest in research. The network is administered by the Swedish University of Agricultural Sciences (more information on their website).

In addition to broader cooperations, there are a number of research cooperations between individual AniCura clinicians and various veterinary institutions in Uppsala, Oslo, Copenhagen, Berlin, Giessen, Hannover, Leipzig, Munich, Vienna, Bern, Zurich, Utrecht, Ghent, London, Purdue, New York, California, and more.

## RESEARCH PROJECTS SUPPORTED BY ANICURA'S SCIENTIFIC COUNCIL

In 2015, five research projects were supported financially by the AniCura Research Fund, in 2016 the supported research projects were increased to the following eight projects:

### “Influence of placement site on contamination of peripheral venous catheter in dogs undergoing dental surgery”

IVANA CALICE, DVM, TIERKLINIK HOLLABRUNN, AUSTRIA

Study results aim to help veterinary clinicians to recognise and minimise possible risks of infection through the catheter during dental surgery.

### “To determine the diagnostic value of different methods of pre-operative screening for cardiac disease in cats undergoing surgical procedures under general anaesthesia”

MARK DIRVEN, DVM, RESIDENT ECVIM-CA (CARDIOLOGY), DIERGENEESKUNDIG VERWIJSCENTRUM DORDRECHT, THE NETHERLANDS.

Many cats have heart diseases without displaying symptoms, which may put the cat at risk when anaesthetised. The study compares the diagnostic value of physical examination combined with blood tests (less expensive) with echocardiography (best practice, but more expensive) to determine if these tests are useful in everyday veterinary practice.

### “Accurate identification and occurrence of methicillin resistant staphylococci and Enterobacteriaceae producing extended-spectrum betalactamases in healthy dogs in Sweden”

ULRIKA GRÖNLUND, DVM, PHD, ASSOCIATE PROFESSOR, ANICURA GROUP, SWEDEN

Antibiotics are important drugs to defeat infectious diseases in dogs. However, antimicrobial resistant bacteria are rapidly spreading among our pets and some diseases can today be very hard to treat. The project aims to improve the quality of bacterial analyses, thus providing better diagnostic tools against the most problematic bacteria. Besides improved quality the occurrence of specific resistant bacteria in the healthy dog population will be monitored.

### “Nutritional aspects of dilated cardiomyopathy in Cocker spaniels and Doberman pinschers”

KARIN KRISTRÖM, DVM, ANICURA ALBANO DJUR-SJUKHUS, SWEDEN

DCM is a heart disease which is more common in Cocker Spaniels, Doberman Pinschers, Boxers, New Foundland Dogs, Irish Wolfhounds and Great Danes. Taurin levels may have an impact on recovery, and this study examines the connection between DCM and Taurin levels across several breeds.

### “The role of sex hormones in idiopathic epilepsy in dogs”

SOFIE VAN MEERVENNE, DVM, DIPL ECVN, ANICURA LÄCKBY DJURSJUKHUS, SWEDEN

Epilepsy is one of the most common neurological disorders in veterinary medicine. In human medicine, the effects of sex hormones on seizures and epilepsy are well documented, but no information exists on the effect of sex hormones on the course of epilepsy in dogs. This study is aiming to examine the epidemiology of seizures in dogs with focus on sex status, to analyse sex hormones in blood samples of dogs with epilepsy and certain receptors in the brain of epileptic dogs. This can be used to develop hormonal strategies to improve seizure control.

### “Probing postretinal function with visual evoked potentials (VEPs) in dogs”

CHRISTINA OBEL, DVM, ANICURA ALBANO DJURSJUKHUS, SWEDEN

Visual impairment caused by diseases in the optic nerves or brain is difficult to evaluate and localise in dogs. An electrodiagnostic method called VEP is commonly used in human medicine, but is not common in the veterinary field. The project aims to evaluate VEP as a diagnostic method for dogs.

### “Selection criteria for the application of pneumatic versus laser lithotripsy in the treatment of canine and feline urinary stone disease”

PETER PANTKE, DVM, MD, TIERÄRZTLICHE KLINIK FÜR KLEINTIERE, BIELEFELD, GERMANY

Over the last two decades, tremendous progress has been made in endoscopic treatment of human urinary stone disease. Small animal urological patients could benefit from such modern minimal invasive procedures in many ways. However, delicate size and structure of the canine and feline urinary tract has hampered medical progress in this field. This research project aims at setting up treatment protocols for lithotripsy of urinary stones in dogs and cats, hopefully leading to replacement of more open surgical procedures in favour of minimally invasive stone therapy.

### “Phenotypic classification of breed related myelopathies in Pugs”

CECILIA ROHDIN, DVM, DIPL ECVN, ANICURA ALBANO DJURSJUKHUS, SWEDEN

Pugs are an increasingly popular breed in Sweden, and some pugs have a little understood neurological disorder called PMP. The study aims to clearer define PMP, assess the prevalence of the disorder and study both pathological and genetic indicators of PMP.



## About AniCura

AniCura is a European family of well-known animal hospitals and clinics specialised in veterinary care for companion animals. Born out of the idea that sharing resources creates opportunities for better veterinary care, the company was established in 2011 as the first merger of companion animal hospitals in the Nordic region. Today, AniCura is a role model within specialised veterinary care and a valued partner for pet owners and referring veterinarians across Europe.

The company offers a wide range of high quality medical services covering preventive and basic health care

as well as advanced diagnostics, internal medicine, intensive care, surgery and orthopaedics. AniCura also provides rehabilitation, physiotherapy and dietary advice and offers selected pet food and care products.

For information on how AniCura is working to shape the future of veterinary care, please visit our website [www.anicuragroup.com](http://www.anicuragroup.com)

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