



DVMAX  
RESEARCH



Veterinary Records



Improved Care



Ease of Use



Integration



ROI

# Case Study

## Return On Investment



# Return On Investment

## Synopsis

A nationally known animal research laboratory projected quantifiable savings of \$139,000.00 per year, or 21.7% of its animal care staff payroll from the implementation of an electronic medical records system. Additional important benefits that were more difficult to quantify directly, such as improved record access and compliance, were also projected by this facility.

## Introduction

This document describes the projected return on investment (ROI) from the implementation of an electronic medical records system in a typical animal research laboratory setting. The laboratory used in this study houses approximately 1000 animals that are USDA regulated species and 2000 mice and rats. The laboratory employs 8 full time veterinary and veterinary technician staff.

The document first outlines the motivations that led the laboratory to consider adopting an electronic medical records system. This is followed by a listing of the quantifiable benefits of implementation, as well as the additional, non-quantified benefits of such a system.

## Background

Maintenance of medical records for research animals has long been an implied part of a “program of adequate veterinary care” as described in the Animal Welfare Act. Recent proposed changes to 9 CFR part 2 would make this medical record keeping standard explicit and mandatory.

Animal research facilities face constant pressure to maintain complete and current medical records for their animal populations. This pressure comes from a desire to provide a high standard of medical care and the general regulatory requirements and challenges faced by research facilities.

The current paper-based systems have several limitations and shortcomings:

- The need to organize and schedule general care protocols and SOP’s for animals upon receipt into the facility (e.g. vaccinations, quarantines, exams, assessments and other standard procedures manually scheduled for each animal)
- The limitations imposed by the existence and location of a single physical record (where is the record, who has it, are all components of the record present?)



- The need to make medical records accessible to different staff easily and quickly (if one person has the medical record, another person must find it)
- The delays inherent in paper or messenger based critical care situations and resulting decline in quality of care
- The extensive time required to research qualified animal populations for upcoming studies
- Difficulty proving compliance and providing documentation for regulatory authorities
- The risk of record misfiling, loss or damage
- Difficulty in collecting and assigning all animal care tasks (e.g. vaccinations, diagnostic procedures, exams, etc.) across the entire facility.

To overcome these limitations, the research laboratory considered the acquisition or creation of an electronic medical records system for their facility.

An electronic medical record system would address all of these limitations and shortcomings by:

- Automate the creation of the animal record complete with all quarantine information, vaccinations, exams and other SOP's based on specific species
- Keeping all medical records for an animal together in one (electronic) "folder"
- Allow easy access to the medical records for any qualified user of the system
- Allowing medical records to be available to multiple users simultaneously
- Allow immediate staff notification of critical care situations (medical crises)
- Allow database searching to qualify available animal populations for use in upcoming studies
- Allow easy access and presentation of records for veterinary compliance review and regulatory compliance auditing
- Allow easy backup of all medical records
- Allow easy access to all of the tasks to be completed for the entire facility regardless of location.



Their interest in implementing a system in a short timeframe, and at a low cost, meant that internal development of such a system was not a viable option. This led them to look at available solutions in the form of commercial off-the-shelf (COTS) packages. After reviewing available animal research focused packages they concluded that only one of these met the majority of their criteria, DVMax Research.

## ROI details – quantifiable benefits

The following section lists the quantifiable projected benefits of implementing an electronic medical record keeping system to replace an existing paper system. Time was estimated at \$40.00/hour on average for the animal care staff in this analysis. The information below was accumulated by direct interviewing of the animal care staff. Time savings estimates were generated assuming automating each of these tasks using the DVMax Research product.

### Paper medical recordkeeping savings

**Projected Savings:  
1250 hours and  
\$50,000/year**

- Vet Record: Requires documentation on administration of medications, laboratory procedures, surgeries and other components necessary to record in a complete medical record. This information requires filling out paper forms, filing them, and entering them into spreadsheet. This manual process would be reduced by 600 hours per year by implementing the automated system.
- Daily Health Assessment Forms: Scheduling physical exams requires filling out paper forms, filing them in animal's record, and doing data entry tasks into a spreadsheet. This manual process would be reduced by an estimated 500 hours per year by implementing an automated system.
- Animal Receipt: Standard procedures are executed for each animal that is received into the facility (i.e. quarantines, exams, vaccines). Implementation of the DVMax solution would automate the scheduling of these tasks. Currently this scheduling process takes 100 hours per year.
- Obtaining Lab Results are manually requested from data unit and transferred to vet. Automated access to lab results stored in the lab data collection system would reduce manual requests by 50 hours per year.

### Tracking of Animal Location and Status

**Projected Savings:  
1100 hours and  
\$44,000/year**

- Eliminate paperwork for moving animals. Hours: 200
- Entering data on status of animal. Someone gathers data i.e.: study, etc. for the purpose of retrieval in spreadsheet. Hours: 300



- Retrieval of data is currently difficult because of incomplete records, missed data entry. This results in manual checking. Hours: 600

## Husbandry/Long Term Care

**Projected Savings:  
500 hours and  
\$20,000/year**

- Automate the scheduling of physical care (such as grooming, teeth checks, baths, physicals, vaccinations, and animal specific needs) based on the animals' protocol. These tasks can then be assigned to a person or group. Hours: 250
- Automate the scheduling of environmental enhancements. Hours: 100
- Automate the scheduling of behavioral assessments and exercise tasks. Hours: 150

## Researching of Available Animals

**Projected Savings:  
625 hours and  
\$25,000/year**

Researching animal availability based on specific animal logistics as well as previous study information if colony animal. Currently this process can take weeks if followed through to completion because of researching through paper records that are not easily accessible or misplaced. Frequent practice will have researcher abandoning research in available animal population and ordering replacement animals even if animals may be available. Hours: 625

## ROI - Non-quantifiable benefits

There are many additional items that are harder to quantify, but that represent clear benefits to the research laboratory:

Regulatory compliance benefits:

- Time saved from not needing to retrieve records for inspection, and then store them again
- Time saved waiting for inspector to read and review records
- Money saved by reducing or eliminating potential citations
- Improved record integrity (record is available for review by inspector)

## Enhanced medical record access

- Improve turnaround time for global access to health records from an average of 3 days to instantaneous, and improved scope of access
- Allow record access to multiple system users simultaneously – no waiting or hunting for records

## More effective use of research animals

- Animals are used for more studies, reducing euthanasia rates
- Fewer animals need to be ordered by facility, leading to cost savings and improved animal welfare
- Researchers have faster access to required animal populations

## Conclusion

The issue of maintaining medical records for research animals continues to gain importance as evidenced by the proposed revisions to 9 CFR part 2. When this revision is adopted, animal research facilities will face immediate pressure for higher standards in medical recordkeeping and the increased likelihood of penalties for non-compliance.

The DVMax Research system addresses these pressures with a flexible and comprehensive medical recordkeeping system that:

- Keeps a single, comprehensive and easily accessed record for each animal
- Automates animal receipt and quarantine SOP's as well as ongoing husbandry SOP's
- Speeds notifications allowing better response to critical care situations
- Provides a facility-wide list of scheduled animal care tasks for review.

These tightened regulatory standards suggest that the expenses associated with medical recordkeeping will have to rise. By implementing electronic medical records for research animals, DVMax Research allows a facility to meet these standards in the future, without significant increased expense.

*This ROI study shows that DVMax Research provides improved medical recordkeeping with electronic medical records for research animals and also provides a very quick recapture of investment through immediate and ongoing savings.*

For additional information about DVMax Research, please visit our website at [www.dvmax.com](http://www.dvmax.com), or contact Sneakers Software, Inc. at **800-261-3856**.