

For the Past 5 Years, **MedWand** Digital Health  
has been developing a disruptive, unique device  
designed to

Create *Physical* Exams in a *Virtual* Telemedicine World



# Today's Telemedicine Limitations

---

- Mainly audio. Only about 8% of all Telemedicine calls actually use a camera.
- No examination, or ability to obtain even simple vitals real-time.
- More “tele” than “medicine”.
- In spite of the obvious advantages and savings, very low adaptation due to the limited nature of consultations.
- **Veterinary Telemedicine** is just in its infancy and years behind human telemedicine solutions yet shares the exact same limitations!



# Telemedicine of Tomorrow

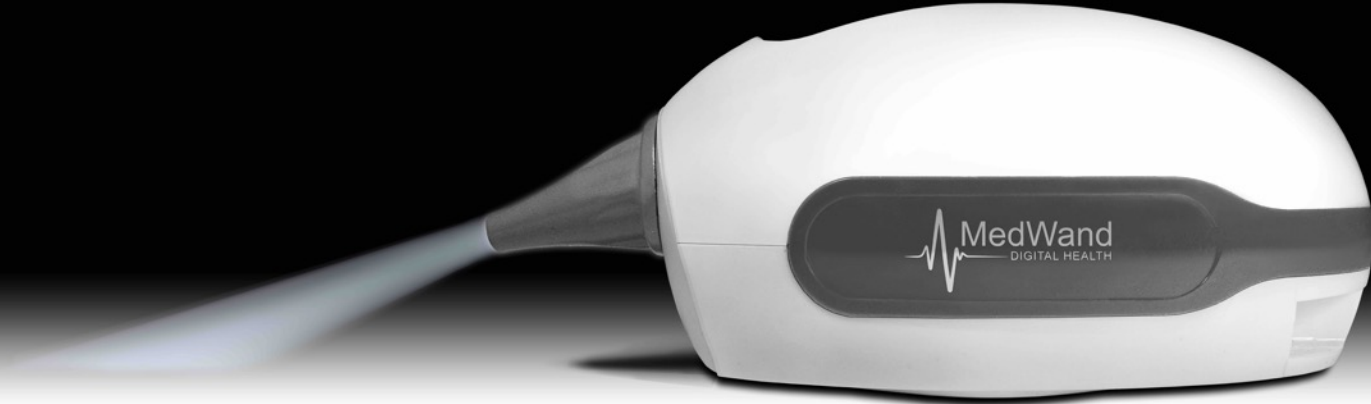


## What if...

- *Direct* patient contact and examination *were possible* right through a computer?
- The number of treatable or detectable conditions could increase dramatically in telemedicine?
- Immediate access to a Human Doctor or a **Veterinarian** could be made possible when today that doctor is hours or even days away from the patient?

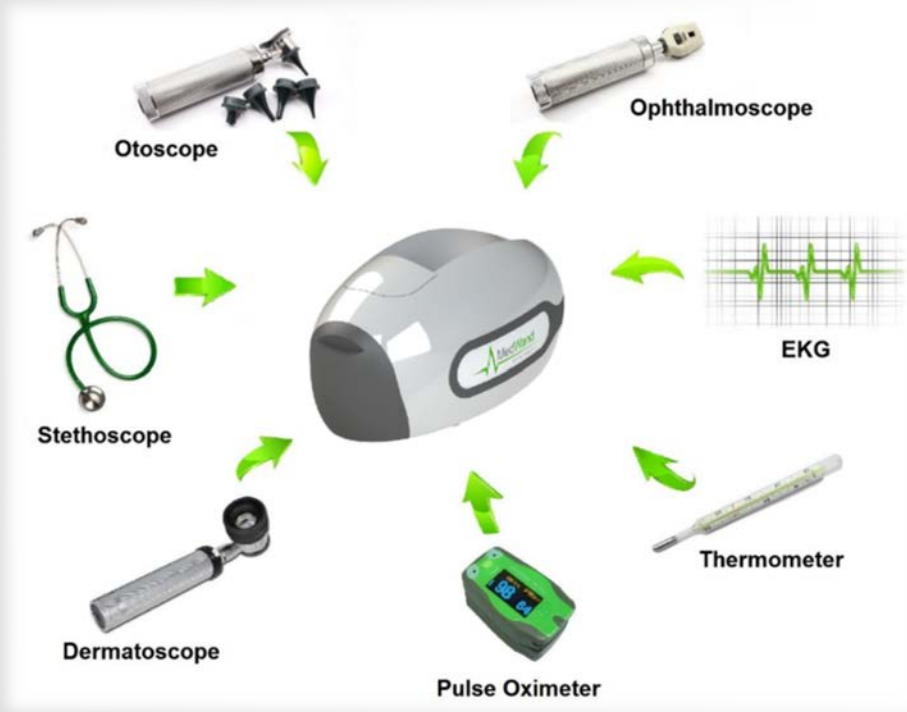


# Introducing MedWand!



- A new medical device that allows clinicians to *actually examine* patients during telemedicine visits.
- **MedWand** performs over 80% of the initial physical exams remotely, *yet it is still under the direct and real-time control of the doctor.*
- Handheld, portable, easy-to-use.
- **MedWand** enhances the *entire* telemedicine industry.
- **MedWand** is the *future* of telemedicine.
- **VetWand** can do the same for Veterinary Medicine now!

# The MedWand




**MedWand combines many medical devices into a single, compact unit.**

# MedWand Turns any Computer into a Telemedicine Clinic




Measure heart rate  
and obtain EKG!



See into your mouth  
and throat!




Listen to your heart!



Examine your skin!



Listen to your lungs!




Measure oxygen levels  
and respiratory rate!




Take your temperature!



Look into your eyes!



Look into your ears!



Listen to your belly!



Via Bluetooth, direct coupling and data sharing for:



- Blood pressure
- Glucose readings
- Weight & BMI



Future Breakthrough Devices



Since **MedWand™** has proven so effective in enabling remote examination of human subjects,  
Why not a **VetWand™** to enable remote examination of animals?





**VetWand™ could enable a true remote exam of any animal (the Patient), with the help of the owner (the Client) under the direct control and supervision of any Veterinarian.**



Listen to the animal's heart, lungs, and belly with the powerful Digital Stethoscope



Take a 2 channel 4- lead ECG with leg clamp pick-ups



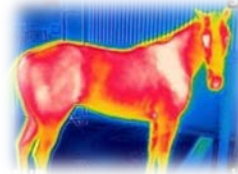
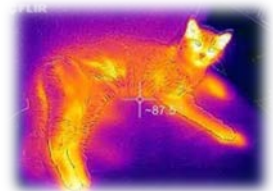
Measure Blood Oxygen, Heart Rate, and Respiratory Rate with ear clip style Pulse Oximeter



Examine animals' eyes, ears, mouth, throat, and skin with VetWand's 12-Mega Pixel, 4K Digital Camera

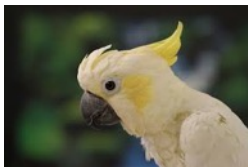
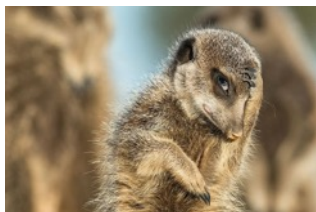
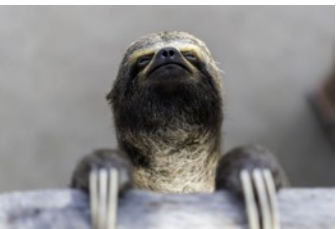


Take Temperature, and find hot spots and injuries with VetWand's powerful FLIR Camera





With Different-Sized Camera Adaptors, Custom-Length Cables and Clips, and Specialized Accessories for SpO2 and ECG, **VetWand™** will be designed to work on all animals from small to large.





# MedWand can be Controlled by the Patient, a Remote Doctor, or an On-site Healthcare Provider

MedWand Patient

TEMPERATURE SPO2/HR/RR STETHOSCOPE CAMERA IR CAMERA ECG EXIT

Temperature is.



**98.5** f



Stopping

Start Demo Mode

MedWand Patient

TEMPERATURE SPO2/HR/RR STETHOSCOPE CAMERA IR CAMERA ECG EXIT

SPO2



SPO2 **97** %

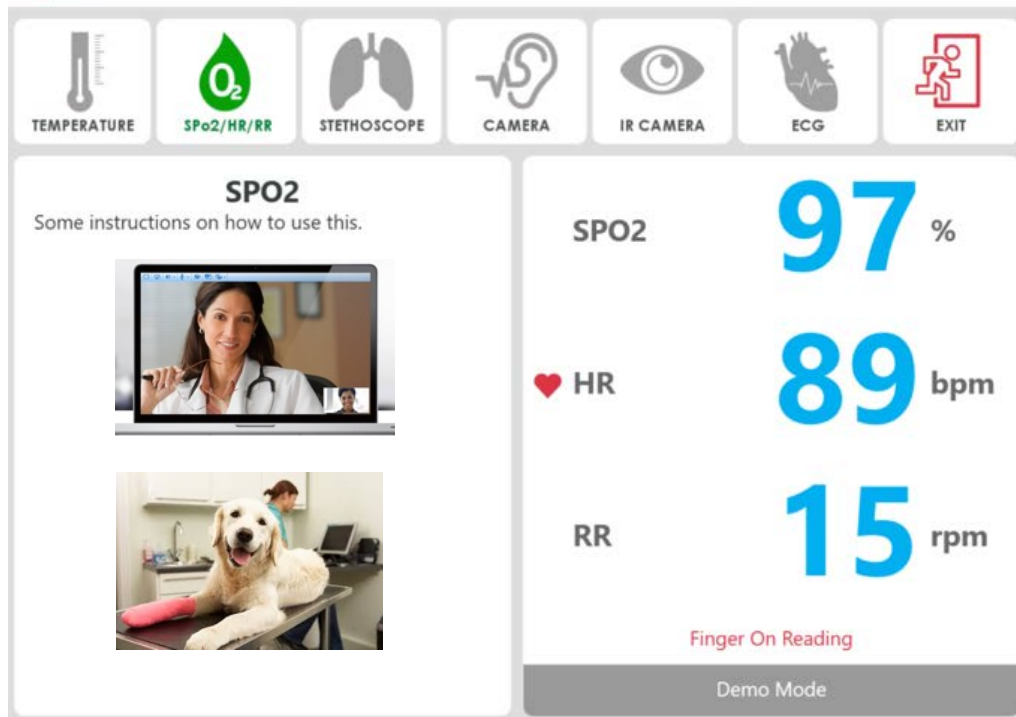
HR **89** bpm

RR **15** rpm

Finger On Reading

Demo Mode

*The VetWand™ can be designed to be just as easy to use.*



# Projected Markets for the VetWand™ Ecosystem.....

- There are about 100,000 practicing veterinarians in the U.S. alone.
- Approximately 49,000 vets are in private clinical practice for companion animals (dogs & cats).
- About 4000 vets are engaged in equine practice.
- There are about 70 million dogs and 75 million cats in the US.
- Over 40 million households own dogs and 36 million own cats.
- Assuming most homes own both dogs and cats, there are about 50 million pet owning households in the U.S.
- There are also 9.2 million horses, 95 million cattle and 75 million pigs living in the U.S.
- There are over 1 million farms in the U.S. that raise livestock.
- That means that each clinical practice vet services an average of 1000 animal households, which is less than human physicians and accounts for the huge difference in income as well.
- The mean number of veterinary visits per year are 2.6 for dogs and 1.6 for cats.
- Mean veterinary expenditure per household per year is about \$378 for dog owners and \$191 for cats.
- This makes the average vet visit expense \$132, which is a resounding endorsement of a \$59 televet call.



# What about Regulatory?

While no specific regulatory hurdles exist for a device like VetWand in the animal medicine space, Veterinary Telemedicine must comply with the Veterinary Doctor, Client Patient (VDCP) relationship guidelines as set down by the AVA.



Testing is in Progress to Facilitate these MedWand Certifications, which should also help to validate the VetWand technology



## How will VetWand™ be Monetized?



There are several ways to monetize VetWand:

- The equipment can be leased or sold.
- It can be bundled with tablets or desktop PCs for a turn-key solution.
- There are disposable sanitary accessories available for sale.
- Different animal types and sizes require different cables for SpO2 and ECG.
- Access and Veterinary coverage can be charged on a subscription and/or a per use basis.
- Store & Forward Exams can be reviewed and responded to under a separate program.

**Currently, the manufactured cost of a VetWand is estimated at about \$300, plus applicable cables and accessories.**



# What will it take to turn MedWand™ into VetWand™?

- It has taken almost 5 years and over \$8 million to develop MedWand, which is now ready and deploying into the Global Market.
- MedWand's core hardware design and cloud infrastructure provide a basis upon which to re-design the product for use by Veterinarians and in fact any animal owner to facilitate remote telemedicine exams on virtually any type of animal from anywhere in the world.
- While MedWand provides a proven design structure, several major changes must be made to enable the hardware to become suitable to animal medicine. Specifically (but not limited to):
  - The entire design will need to be made wireless over Wi-Fi & Bluetooth where it is currently USB tethered.
  - Complete re-design of the camera system from 5Mp to 12Mp with a much deeper depth of field and autofocus range to accommodate animals of every size.
  - Addition of an entire FLIR (Infrared) secondary camera system. This is critical for animal medicine, particularly in large animals and provides images of where an animal may be in discomfort, which they cannot articulate like humans.
  - Re-design of the pulse oximeter system to migrate from reflective finger architecture to plug-in ear clip design with various available clips designed for all sizes of animal from mouse to elephant.
  - Re-design of the ECG system from single channel 2-lead to dual channel 4-lead and migration of touch pad design to leg clamps, also available in a variety of sizes to accommodate all sizes from mouse to elephant.
  - Elimination of the IR thermometer to be replaced by the more accurate (for animal applications) FLIR system.
  - Modification of the stethoscope filters for animal applications.
  - All new packaging, manuals and deliverables
  - Design of multiple new SpO2 and ECG cable types.
  - Re-design of cloud ecosystem to accommodate Veterinarian Medicine requirements.
  - Separate regulatory as required (FCC, UL, CUL, ISO)







## Cost, Timeline, and Business Relationships

- To complete the Design of the entire VetWand System, based where possible on the foundation designed into the MedWand, and including a production ready design of the unit, tools, accessories and supporting ecosystem, it is estimated the total cost will be about \$3 million. This is roughly 1/3 of the development cost of MedWand, or what we estimate VetWand would have cost to develop monolithically if MedWand did not exist.
- We expect, with proper funding, that a completed market ready solution could be ready inside of a year.
- Risks can be mitigated by associating payments with milestones. For example: One third to start, one third on prototype completion, one third at completion. Much of the technology risk has been eliminated due to MedWand development efforts.
- MedWand will consider granting exclusivity to the funding entity under certain performance guarantees.
- MedWand will retain all rights to all design pieces currently associated with the MedWand design that are applicable to VetWand.
- MedWand is willing to consider a joint venture, royalty structure, spin off, revenue sharing, or any other relationship that makes the most sense and provides the most opportunities for both parties.



**Thank you!**

Next Steps?

