Global Connections

FOR THE MEDICAL TREATMENT OF SEA TURTLES

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The health of threatened sea turtles is an important concern for maintaining the critical ecological roles that they play in marine ecosystems. Threats to sea turtle health that result in trauma, disease, and stranding, as well as the subsequent need for medical care, are increasing. Yet existing capacities to meet such challenges have been fragmented and difficult to implement on a broad scale. Hundreds of sea turtle rescue and rehabilitation facilities around the world have focused principally on disease surveillance, stranding and rehabilitation protocols, veterinary workshops, and provision of online resources that cater to veterinary surgeons. However, there is no comprehensive, accessible platform that the many stakeholders in the sea turtle rehabilitation community can turn to when faced with treating an injured sea turtle. The Sea Turtle Rescue Alliance (STRA) uses modern telemedicine technology to fill this void.

Shared medical networks are important tools in human and veterinary medicine alike. STRA facilitates collaboration and connectivity between veterinary professionals, enhances knowledge and capacities at rescue centers, and helps to ensure that standards and best practices are adhered to by sea turtle clinicians worldwide. STRA has partnered with the veterinary software company titled Provet Cloud and with the Swiss-based ocean conservation nonprofit OceanCare to develop an easy-to-use, globally accessible, cloud-based system for sea turtle clinical records. This low-cost platform offers its users tailored access to sea turtle technicians, field biologists, veterinarians, and managers. STRA can even be used for virtual consultations about clinical cases and for clinical and diagnostic support. STRA also aspires to provide online training to rescue-center professionals, to assist with refining and reporting clinical techniques, and to serve as a centralized hub for individual identification and tissue-sample databases.

Initial case consultations and daily telemedicine service have already begun, and usage is rapidly accelerating. A juvenile hawksbill turtle admitted to a rehabilitation center in Kenya with significant head trauma from a suspected spearfishing event was successfully triaged and treated through daily consultations with STRA veterinarians. This turtle exhibited profound neurological deficits and required intensive medical care, but with help from STRA, the Kenyan team successfully released the patient to the wild. In another case, STRA was able to assist efforts to triage and manage an adult female green turtle in The Gambia that had experienced severe trauma from machete strikes. And recently a subadult green in the United Arab Emirates was diagnosed with gastrointestinal obstruction; using STRA's telemedicine platform, veterinarians were able to virtually guide the facility staff through complex case management including whole blood transfusion, formulation and administration of intravenous nutrition, and even laparoscopic surgery. This patient is recovering well and is expected to be released. Those examples provide a small glimpse of what STRA can offer to the more than 130 (and growing) sea turtle rescue and rehabilitation centers worldwide, where access to advanced care might not otherwise be available.

STRA offers an exciting opportunity for global collaboration in the effort to protect threatened and endangered sea turtles. Not only will a global platform of shared knowledge and expertise like STRA improve individual patient care and save the lives of many sea turtles, but also it can organize and connect far-flung practitioners and can combine participants' often underused expertise and clinical datasets to refine actionable therapies so that the gold standard of care is afforded to rescue facilities of all means and abilities everywhere. •

AT LEFT: Lewa, an officer at Local Ocean Conservation's Turtle Rehabilitation Centre in Kenya cares for Pole, a juvenile hawksbill turtle. © Local Ocean Conservation