The health and wellbeing of pets is at the core of what we do every day as veterinary professionals. We are fortunate to be in a profession that is constantly leveraging medical research and advancements in technology to update guidelines and best practices with the ultimate goal of improving veterinary care.

Implementing a Patient-Outcome Improvement Plan

A COMMON GOAL
An effective veterinary patient-outcome improvement program should address results that matter to both the health care provider and client.

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From the Field shares insights from Banfield Pet Hospital veterinary team members. Drawing from the nationwide practice’s extensive research, as well as findings from its electronic veterinary medical records database and more than 8 million annual pet visits, this column is intended to explore topics and spark conversations relevant to veterinary practices that ultimately help create a better world for pets.
Veterinary teams strive to provide high-quality medicine to achieve the best possible outcomes for the pets in our care. An important part of bringing this to life at Banfield Pet Hospital is through our patient-outcome improvement work.

Implementing such a program is something all practices—no matter their size—can do, and it’s not solely the responsibility of the veterinarian to contribute to its success. A successful patient-outcome improvement program requires buy-in from the whole team, and veterinary technicians are in a unique position to partner with veterinarians, other team members, and clients to help bring these efforts to life.

**MEASURING PATIENT OUTCOMES AND IDENTIFYING POPULATION SEGMENTS**

Before your veterinary team starts a patient outcome improvement program, it is important to first consider measurement of patient outcomes. There is much to be learned about this concept from our counterparts in human health care—one of the foundational principles of a value-based human health care system is known as the measurement of health outcomes that matter. It is important to identify and record those outcomes that are important or a priority to all parties involved in the provision of care. Additionally, recognize that these priorities may be different for each group.

When applying this principle in veterinary medicine, interested parties include the veterinary team providing the care, the patient, and the client. Outcomes that matter to the patient may be determined with input from both the providing team and the client. Initially, it may be easiest to identify a patient outcome that matters primarily to the providing veterinary team. Examples of these may include outcomes such as “reduced patient mortality” or “improved patient mobility.” Information on obtaining this type of information from clients is presented below.

Next, identify a clearly defined population segment. To improve patient outcomes, start small with a well-defined, accurately identified patient population. This allows for more clear and efficient interventions and follow-up analyses. A population segment can be defined as pets with the same condition or disease, along with risk factors that may influence outcome. Continuing the outcome examples from above, defined population segments could include “cats undergoing elective anesthesia” or “dogs with degenerative joint disease” (TABLE 1).

**EXAMINING AND ANALYZING AVAILABLE INFORMATICS AND DATA**

Once the desired patient outcome and associated populations have been identified, examine and analyze the available informatics and data. If considering anesthesia mortality, the hospital team should identify, review, and analyze available literature and evidence-based information on risk factors that lead to increased mortality. This helps ensure the veterinary teams

<table>
<thead>
<tr>
<th>PATIENT OUTCOME</th>
<th>DATA</th>
<th>POTENTIAL INTERVENTION</th>
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</thead>
<tbody>
<tr>
<td>Reduced anesthesia mortality in cats</td>
<td>American Society of Anesthesiologists status of 3, 4, or 5 increases risk</td>
<td>Stabilize and improve patient condition prior to initiating anesthesia</td>
</tr>
<tr>
<td></td>
<td>Hypothermia increases risk of mortality and anesthetic complications</td>
<td>Preemptively warm and provide passive and active patient warming during and after procedures</td>
</tr>
<tr>
<td>Improved mobility in dogs with DJD</td>
<td>Overweight and obese pets are at increased risk of developing DJD</td>
<td>Institute weight loss programs to improve clinical signs</td>
</tr>
<tr>
<td></td>
<td>Certain breeds have been shown to be at increased risk for cruciate ligament rupture</td>
<td>Educate owners preemptively and work to maintain lean body condition in at-risk breeds</td>
</tr>
</tbody>
</table>

DJD=degenerative joint disease.
providing anesthesia understand the risks associated and the interventions that have been shown to improve outcomes. Examples are provided in TABLE 2.

IDENTIFYING WHAT MATTERS TO THE CLIENT

When a veterinary patient-outcome improvement program is started, the outcomes that matter to the health care provider are just one of the components that must be considered. The other aspect is determining what matters to the client and pet. This information may not ordinarily be collected during a veterinary visit. Outcomes that matter may be objective (for example: “I want my pet to regain her normal appetite”) and will vary depending upon the patient and the clinical situation. However, measures may also be more individualized and subjective (for example: “I want my dog to return to playing with his toys”) and can include quality-of-life (QoL) factors that may be defined differently by different people.6,7 Collecting this important information isn’t always easy, but it is critical to identify those factors that are priorities to clients to truly impact patient outcomes.

IMPLEMENTING SPECIFIED INTERVENTIONS

Once the outcomes that matter to the veterinary team
as well as the client and pet have been identified and collected, specific interventions that help achieve those outcomes in the target population can be implemented. An important point to remember is that the goal and the outcome need to be patient improvement. Consider the example presented above on improved mobility in patients with degenerative joint disease. Items that may be readily measured—for example, number of radiographs performed on patients presenting with lameness, number of anti-inflammatory medications or prescription diets dispensed to those patients—are measures of production. A true patient-outcome improvement program will have measures such as a larger percentage of patients achieving success in weight loss and improved pet QoL scores from clients. One example of such an approach can be found in FIGURE 1.

PLAN, DO, STUDY, ACT (PDSA)
At Banfield, we implemented a quality-improvement tool called the Plan, Do, Study, Act (PDSA) cycle. This tool, from the Institute for Healthcare Improvement, provides a process to:
- **Plan** a change or intervention
- **Do** the work
- **Study** that the work had the intended outcome
- **Act** on what you’ve learned

Instituting a process management tool like this can help hospital teams ensure that the desired patient outcome improvement has been achieved and make changes, if indicated, based on results. If this is a new concept for your hospital, it might be beneficial to identify someone like a veterinary technician to be responsible for helping keep the team on track and partnering with a veterinarian to help ensure they’re addressing all steps of the PDSA cycle.

Developing a patient-outcome improvement program may be a novel way for your veterinary team to approach the provision of care in a hospital. However, having a focus on not just treatments within a hospital, but also including insights on the results of care outside the hospital from client perspectives, provides a more holistic view of the entirety of patient outcomes. **TVN**