

Results from Two-Year Study on Animal Level Data

About Animal-Level Data

Animal-level data is tied directly to a unique animal at the shelter. Unlike the current Intake & Outcome Database which aggregates these individual data points to specific intake and outcome types, animal-level data is not aggregated. It provides data fields such as age, breed, intake/outcome type and sub-types to have a more holistic view of a single animal in the shelter.

Aggregate data is valuable to understanding overall numbers and trends but has limitations. Animallevel data allows for deeper analysis of associations between intakes and outcomes, animal traits and trends in the industry to enhance programming and decision-making. For example, instead of only capturing how many intakes and outcomes by reason, knowing a specific animal's intake reason and outcome reason can answers questions like: Do certain intake types result in higher adoption rates? What is the difference in length of stay by breed?

About the Study

Shelter Animals Count and Tufts University Center for Shelter Dogs collaborated on an Animal-Level Data study to gather information about how to best collect and utilize this data, with a goal to identify the most accurate and efficient way to retrieve the data from shelters/rescues. The study took place over a two-year period (2020-2021).

The pilot study enrolled 108 shelter partners in the United States with intakes of cats and dogs and digitally recorded data. Shelters were intentionally diverse in organization type.

Animal-level data was received from 98 shelter partners with 92 of those shelters submitting at least 12 months of usable data. Participating shelters utilized a range of shelter software platforms; while efforts were made to include as many software platforms as possible, feasibility of data reporting across different platforms influenced participation.





Organization Annual Intakes











Identified Challenges & Proposed Solutions

The study identified common challenges among participants, along with possible solutions to address or bypass existing barriers to success, as identified below.

Challenge #1: Lack of Standardized Data Entry

Data entry is typically accomplished by multiple people across the organization, many of them in different roles. Factors such as staff turnover and time constraints influence both development of consistent data entry policies and the training of staff on those practices; the result is significant variation between and within shelters in how data fields are defined and utilized.

For example, intake and outcome types differ significantly from shelter to shelter. While there are some common themes to how animals enter the sheltering system (surrender by owner/guardian, found as a stray by the public or shelter staff, transfer from another shelter), the terms used to capture these events are not common from one shelter to the next. This makes aggregating data across shelters incredibly complicated, requiring

In this pilot study, researchers identified over 128 unique intake types and 102 unique outcome types from the 92 shelters' data. a solid understanding of how each shelter is using its terminology (which, as stated above, may not be common across all individuals entering data in that shelter) and also how that terminology relates to the terminology used by other shelters.



Many study participants expressed interest in the development of standardized definitions for basic fields that could be used across different shelters and software platforms, and Shelter Animals Count looks forward to leading these conversations.

Researchers encountered challenges with additional fields being reported differently depending on staff and software. Age for some shelters was categorized as kitten/puppy/adult while others include a date of birth or numerical age at intake. Breed was recorded at primary and secondary levels at the best guess of the staff and included alternatives such as "mix".

Solution #1: Standardized definitions are a potential solution to this challenge, benefitting animal welfare organizations and staff as well as organizations like Shelter Animals Count. If implemented, this strategy would remove the need for shelter staff to create these definitions themselves, which study participants indicated was an existing barrier to improve data entry.

Additionally, standard terminology and definitions would streamline data entry training for shelter staff and provide an opportunity for development of training materials and resources from external contributors, further reducing the resource investment from each individual shelter. Finally, standard definitions would allow organizations like Shelter Animals Count to draw more meaningful conclusions from multi-shelter data, improving the industry's ability to develop and evaluate best practices.









Challenge #2: Mixed Methods Data Tracking

In addition to the data stored in shelter software programs, many shelters utilize additional methods to record and track data. Ranging from separate software programs to spreadsheets and even paper



records, this data is often tracked separately due to lack of comfort with the existing shelter software program, limitations in how data can be entered or exported in that program, or simple expediency. Regardless, the integration of these additional data points is necessary for a complete picture of the animal-level data for each organization.

Solution #2: Increase education on best ways to track within current software to manage data in a single place.

Challenge #3: Data Reporting

Although attempted, the use of pre-existing reports in shelter software programs to complete data collection at the animal level was not possible. Custom-built reports solved this challenge with some software systems, but due to differences across platforms in how information is entered, stored, and exported, even custom-built reports were not able to be standardized from one platform to another. Differing formats across shelter software platforms presented additional challenges in integrating the data into a cohesive set. In this pilot, a combination of multiple pre-existing reports per shelter, custom reports, and hand-entry were utilized when aggregating the data set.



Data reports in shelter software programs are typically built to display:

- 1) data relative to an event, such as an intake or outcome or
- 2) the most recent or current data for individual records or a group of records.

Reports that return data from a range of time are not typically built to identify all animals who were active or in care during that time, which is crucial to animal-level reporting on a monthly basis.

Solution #3: Shelter Animals Count is developing an Application Programming Interface (API) to communicate directly with shelter software programs to deliver the desired data for organizations that choose to opt-in to share their animal-level data. The API integrations will greatly reduce the burden of manually developing and running reports to import to the SAC database, missing data entry deadlines, etc. and will populate all the necessary fields into the appropriate format without relying on the structure of previously developed reports.











Challenge #4: Targeted Areas for Investigation

Multiple Intakes and Outcomes: In many shelters, animals may experience multiple intakes and outcomes during a one-month period. In order to provide accurate monthly accounting on an animal level, strategies will need to be developed by those working in animal-level data to ensure these animals are counted appropriately.



Medical and Behavior: While there is interest in data collection on the animal level for medical and behavioral needs and treatment in the animal shelter, the highly varied nature of both creates challenges. How they are recorded in the database systems means that these fields will require additional investigation.

Foster Care: Similarly, animals in foster care are recorded in a variety of ways, varying from shelter to shelter. Depending on the way each platform organizes the data of foster animals, they may or may not appear in reports (custom or otherwise) of animals in shelter care. Additional investigation and definition are needed to feasibly report this data on an animal level.

Solution #4: Additional investigation on how to best overcome these targeted challenges is needed.

Why it Matters

- Empower shelters to better understand and use their own data to inform decision-making.
- Through the lens of data entry best practices, we can uncover individual or prevalent operational inefficiencies and other barriers, inspire collaborative innovation among shelter peers, and increase life-saving.
- When the data is reliable, we can uncover opportunities for programs, funding, policy change, research studies, etc. that weren't previously known.
- With accurate animal level data, we can begin to better answer complex questions on dog supply & demand, new areas where shelters can support pets and people in communities, & other endless possibilities!









Takeaways

- Shelter partners displayed an interest in utilizing data to inform operations, program decisions, and organizational goals.
- Challenges such as time constraints, software training and reporting influence the extent to which this data can be mobilized for the betterment of the organization and the industry as a whole; yet, potential solutions exist that would have far-reaching effects.
- The development of an API to retrieve animal-level data from software platforms could provide the first collection of animal-level data from animal shelters on a national level. When opting in to an API, shelters are encouraged to understand what data is being collected and how it will be used.
- In order to both improve the usefulness of animal-level data and the effort on the part of shelter staff, development of standardized definitions for commonly used data fields is crucial to long-term success. This resource could form the backbone of a data entry toolkit for shelters to provide guidance on standardized definitions, as well as best practices and strategies to ensure data validity, quality, and impactful utilization.
- Until steps are taken to resolve the challenges outlined in this report, extreme caution should be used when assuming ALD as fact.

The full report is available to view upon request.

Thank you to all participating shelters, rescues and software companies!

Questions? Shelter Animals Count info@shelteranimalscount.org





