Saving by the numbers: Using shelter data improve animal welfare

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Challenge you

to make greater use of your data
to improve the welfare of your animals

but

To do so wisely
Today

<table>
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<th>Share some</th>
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<tr>
<td>• Influential metrics</td>
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<tr>
<td>• Discuss their interpretation</td>
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<th>Examples of how</th>
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<tr>
<td>• data can guide and change behavior within a shelter</td>
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<tr>
<td>• data can help build and enhance cooperation among organizations in a community</td>
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Can greater evaluation of data help your shelter?

“Harnessing the insights from data to drive decisions has the potential to transform the amount of change nonprofits can make in the world.”

“Without data, decisions are left to tribal knowledge or worse, the whims of the Highest Paid Person’s Opinion (HiPPO).”

S. MacLaughlin in his book, *Data Driven NonProfits*
Data should be useful
else why collect it?

• At the individual animal level

• At the population level where it helps inform:
  
  where the organization has been
  where it is heading
  whether “programs/policies are working”
  (e.g., is your shelter achieving its goals?)
Why use your data?

Data can
- Increase insight
- Suggest goals/highlight problems
- Measure progress
- Enhance communication
- Motivate
- Build cooperation
- Aid in grant acquisition

All leading to enhancing the welfare of your animals
What metrics should shelters monitor?

• Consensus
  - Basic intake/outcome data
  - Average length of stay
  - Some measure of live release

• Help you understand what is happening

• Metrics should be allied with your shelter’s Objectives
  - Goals

Let your goals/issues determine your questions and your questions determine the data you will analyze.
METRICS IN CONTEXT

INTAKE
• Owner-relinquishment
• Stray
• Transfers in
• Other (e.g. legal seizures, health dept., TNR, S/N, special programs)

Within the shelter

Animal movement
Housing capacity
Census
Disease incidence
Behavioral health

OUTFLOW
• Adoption
• Return-to-owner
• Transfers out
• Euthanasia
• Other (e.g. died in shelter, lost)
What are your shelter’s basic objectives?

1: Reduce intake from community (e.g., S/N, TNR programs, subsidized vet care)

2: Provide for the best welfare of the animals in your shelter as possible (e.g., prompt vaccination; enrichment; daily rounds)

3: Release as many animals alive as possible (e.g., transfer out; offsite adoptions)
Intake metrics

Uses: to describe, set priorities and plan, monitor effectiveness of strategies, communicate, . . .

Common Objective:
Reduce intake from your community
So, which intake metrics?

- Who is entering?
- Where are they coming from?
- When are they entering?
- What’s happening? (trends)
Trend in intake of oldest cats
2008-2017

- 8-12 yrs
- 13+ years
Program evaluation: S/N and TNR efforts

Example: Shelter has a S/N voucher program for owned cats and a TNR program for free-roaming cats.

Objective: Reduce intake of cats from the community

What’s the plan? SMART goals

What metrics could you monitor?
Reduce incoming homeless cat numbers (from the “service area”) – by OGS & stray groups

What could a shelter monitor?

- Decreased cat intake
- Decreased kitten intake
- Increased % of cats sterilized at intake or when trapped
- Increasingly older population of cats entering
- Lower % of pregnant/lactating cats
- Lower % of queens and kittens
What could you do to enhance effectiveness?

Target spay/neuter efforts for owned cats/free-roaming cats

- Intake data: zip code, GIS
- Where are your participants (in subsidized programs) coming from?
- Kittens: where are they coming from?
- Other metrics?
Within shelter metrics

Average Length of Stay
Housing Capacity
Housing capacity is a function of space (and staffing)

- Intake exceeds outflow
- Animals accumulate, adherence to protocols declines
- Disease rates rise
- Isolation facilities are overwhelmed
- Length of stay increases
What can be done to diminish overcrowding?

- Build more housing units
- Increase outflow
- Manage intake
- Reduce time in the shelter
Housing capacity

Influential metrics in a period

- Estimated number of animals that you can house
- Average length of stay
- Intake / outflow
- Average daily inventory
Estimate the number of humane housing units (HHUs) you have available

Number of animals you can house at one point in time

- Holding - kittens (12 - 20)
- Holding - adult cats (25 - 30)
- Adoption-kittens (20 - 35)
- Adoption adult - cats (22 – 28)
- Isolation - (15 – 18)
Your average daily inventory

Compared to the number of humane housing units that you have

Should not be larger!
Dynamic capacity: the number of new animals you can house in a time period (assuming the shelter is full)

\[
\text{# HHUs} \times \frac{\text{# of days in period}}{\text{Ave. LOS}} = \text{# of new animals shelter can house}
\]
Simplify the formula

*Divide both sides of equation by the number of days in the period*

\[
\frac{\text{No. of HHUs}}{\text{ALOS}} = \text{animals that should enter/leave daily}
\]

E.g., 30 humane housing units/ 15 days = 2 animals per day can enter and 2 must leave
What happens to housing capacity if ALOS is reduced during Summer?

<table>
<thead>
<tr>
<th>Number of housing units</th>
<th>ALOS (days)</th>
<th>New animals that could be housed</th>
<th>Number of animals to accept daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>22</td>
<td>209</td>
<td>2.3</td>
</tr>
<tr>
<td>50</td>
<td>20</td>
<td>230</td>
<td>2.5</td>
</tr>
<tr>
<td>50</td>
<td>18</td>
<td>256</td>
<td>2.8</td>
</tr>
<tr>
<td>50</td>
<td>16</td>
<td>287</td>
<td>3.1</td>
</tr>
<tr>
<td>50</td>
<td>15</td>
<td>307</td>
<td>3.3</td>
</tr>
<tr>
<td>50</td>
<td>14</td>
<td>328</td>
<td>3.6</td>
</tr>
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Assumptions associated with the formula

- Intake = outflow
- Evenly spaced over the period
- All HUs are occupied
- The ALOS is constant across the period
- Estimates from last year are valid for this year
- Using Care-based ALOS
Be aware
Understand the numbers that you use
Goal

Minimize ALOS

Numerous strategies

Monitor ALOS regularly
ALOS is a summary measure

Can mask the experience of subgroups (e.g., age group, source)
Start with overall ALOS

Then refine

by age group, source
(e.g., owner-surrender, stray)

by in foster or not

by time (e.g., season)

by time to various events
(e.g., physical/behavioral evaluation, S/N surgery)
How is ALOS calculated in software?

**Intake date:** average length of stay among animals entering during the period

**Outcome date:** average length of stay among animals leaving during the period

**Care-day:** average length of stay during the period of animals present during the period
Which approach should you select?

Depends . . .
on how you intend to use the information and
the time frame of interest
Which method to use?

Following ALOS by year
   All produce about the same estimates

Following ALOS by month/season
   Intake-based ALOS: may be biased downward
   Outcome- and care-day: could be used

Estimating housing capacity for year
   Don’t advise unless ALOS, intake are constant

Estimating housing capacity for month/season
   Use care-day based
Outcome metrics

Live Release Rate
Live Release Rates (LRR)

Shelters are complex organizations with a myriad of objectives, needs, and expectations.

LRR alone is only a glimpse at how the shelter is doing.

Would a for-profit company focus almost exclusively on their overall annual sales?

Need a far more robust look!

returned adoption rate, adoption rate, death rate, euthanasia rate, still-in-shelter rate, etc.
Several calculations of LRR

Live outcomes divided by

• All outcomes during the period
• Intakes during the period
• Animals that could experience an outcome (intakes + still in shelter)
• Asilomar: included ORE (healthy, TM, TR) in the denominator and excluded those that died/lost

  OR

• Live outcomes and those remaining in the shelter divided by intake

Probably others . . .
Pitfalls of LRR

- One metric presenting of a complex system
- Many definitions / meanings
- A summary measure
Summary

Using your data can improve your operations and the welfare of your animals – align your use of metrics with your Mission and Objectives

Formulate SMART goals

Metrics have strengths/limitations – use and interpret wisely

Of course, any metric requires valid data
Every Nose Counts:  
Using Metrics in Animal Shelters

Available on Amazon