MEALS ON WHEELS
ANNUAL CONFERENCE & EXPO
2018
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BIG DATA, BIG RESULTS: Leveraging Your Data to Quantify Your Program's Impact

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TODAY’S AGENDA

1. Who are we?
2. What challenge did we face?
3. How did we quantifying VNA’s impact in Dallas?
4. How are we engaging donors and sharing our story?
5. How can you make data work for your organization?
6. Q&A
WHO ARE WE?

An introduction to VNA and PwC

The Visiting Nurse Association of Texas

Our Mission
The mission of VNA is to help seniors age with dignity and independence at home. VNA offers Meals on Wheels in Dallas County, and Palliative, Hospice and Private Care in 13 North Texas Counties. On average each day, VNA carries a census of 270 patients through our Palliative and Hospice Programs, and provides more than 4,100 meals via Meals on Wheels to hungry homebound seniors and disabled adults.

PwC’s DoubleJump™ Health Incubator

Responsible Business Leadership
Driven by our purpose and values, we are making an impact in our communities and delivering business value by helping create a more equitable society.

Bodylogical®
A validated, scientific breakthrough in computational modeling of an individual human body that creates a “digital twin” to accurately simulate health predictions to help combat chronic disease.
WHAT CHALLENGE DID WE FACE?

“What does it all mean? What’s the impact?”

How do I quantify the *real-world effect* of Meals on Wheels?

What impact does this have on the *community at large*?

How do you differentiate and signal the value created by your organization?

Our mission: Analyze the MoW program to determine impact, quantify ROI, and ground donation discussions in data.
HOW DID WE QUANTIFY IMPACT?

The power of simulation modeling

Models are used across multiple industries

By developing models to represent the systems we are trying to understand, we can:

1. Run hundreds of thousands simulations to understand possible outcomes
2. Test different hypothesis to understand the impact of choices
3. Run optimizations to find the best alternatives
HOW DID WE QUANTIFY IMPACT?

Creating a community of digital twins

Fusing science & analytics to create a “digital twin”

PwC’s patent-pending model unlocks science to manage health and understand costs

- Transformed academic and medical science into math model
- Replicated physiological systems and associated interactions
- Validated with numerous data sets
- Published results in peer-reviewed journal (PLOS ONE) and at various scientific conferences since 2016
HOW DID WE QUANTIFY IMPACT?

Combining data for rich insights

Modeling VNA’s clientele

Our team was able to model the impact of the Meals on Wheels program through a combination of different data sets: VNA, public, and research.
WHAT DID WE DISCOVER?

The value of a meal to the Dallas community

Each meal provides
~48% ROI to the Dallas community in terms of health improvements for clients

$6 per Meal Cost

$8.87 per Meal Value
WHAT DID WE DISCOVER?

A shift in the distributions to the left indicates MoW client health improvement.

**Blue Line**
The health state of clients VNA serves without receiving any MOW meals.

**Red Line**
The health state of clients VNA serves with one MOW delivered daily.

MOW positively impacts biomarkers, which propagate health improvements across chronic conditions.
WHAT DID WE DISCOVER?

MoW Reduces Healthcare Costs by ~7% in Dallas

The MoW program is estimated to prevent 24 heart attacks, 12 congestive heart failure hospitalizations, and 12 strokes per year.
WHAT DID WE DISCOVER?

Key areas of community health improvement

- Dementia: 25%
- Loneliness: 25%
- Cardiovascular: 82%
- Home Health & SNF Utilization: 48%
- Malnourishment: 82%
WHAT DID WE DISCOVER?

MoW Reduces Healthcare Costs by ~7% in Dallas

VNA saves an estimated $10.4M annually in health costs for its clients
HOW ARE WE ENGAGING DONORS?

Delivering a powerful message, backed by data

Independence and dignity start with a single meal

VNA Meals on Wheels nourishes the whole person by providing food, friendship, and a daily safety check to help our homebound neighbors age in place. See how your investment makes a real impact on our community and changes lives.

Exploring the Full Impact of Meals on Wheels

VNA helps seniors stay in their own homes, where they want to be, which is far less costly than alternatives like nursing homes. A recent study by the Center for Effective Government showed that every $1 invested in Meals on Wheels can result in up to $26 in Medicaid savings. See how your investment makes a difference.

Total individuals supported: 7 individuals

Community Benefits

<table>
<thead>
<tr>
<th>Benefit</th>
<th>No Meals on Wheels</th>
<th>Meals on Wheels</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of cardiovascular disease</td>
<td>$20,700</td>
<td>$18,020</td>
<td>$2,680 saved</td>
</tr>
<tr>
<td>Cost of dementia</td>
<td>$30,980</td>
<td>$27,110</td>
<td>$3,870 saved</td>
</tr>
<tr>
<td>Cost of diabetes</td>
<td>$15,490</td>
<td>$14,890</td>
<td>$600 saved</td>
</tr>
<tr>
<td>Cost of nursing home</td>
<td>$142,530</td>
<td>$135,090</td>
<td>$7,450 saved</td>
</tr>
<tr>
<td>Re-admission rates (30 Day)</td>
<td>17.1%</td>
<td>14.3%</td>
<td>2.80% reduction</td>
</tr>
<tr>
<td>Total hospitalizations</td>
<td>0.47</td>
<td>0.40</td>
<td>0.07 fewer</td>
</tr>
</tbody>
</table>

Your investment can deliver cost savings of: $14,600

For the full PWCR Impact of Meals on Wheels Report please click here. For any further questions please contact Chris Culak (214) 608-2160 or culakc@matex.org.
HOW ARE WE ENGAGING DONORS?

Introducing data need not sacrifice your client’s powerful, personal message.

*Independence and dignity start with a single meal*

Meet Debora, 74, the proud grandmother of three. She loves dogs, mystery novels, and a good laugh.

Debora not only depends on VNA to get the nutrition she needs; she cherishes the personal visits and connection with our volunteers.

See the impact your donation has on VNA clients*:

- 18% reduction in congestive heart failure
- 17% reduction in hypertension
- 13% reduction in heart attack risk
- 13% reduction in risk of dementia
- Decreased loneliness (with plenty of good laughs)

DONATE NOW
HOW CAN YOU MAKE DATA WORK?

Collecting and analyzing data uncovers new insights, which can guide your donor strategy.

Five years...or 27 months?
Closer analysis of existing data revealed VNA had a been communicating a longer average length of service to donors.

Do you have a primary care physician?
VNA is now asking MOW Clients how they access health care, and using that data to identify natural partners and connect clients to care.

This initiative not only determined the value of a meal, it was a catalyst to review our current data and discover new insights.
HOW CAN YOU MAKE DATA WORK?

What opportunities does your organization have to evaluate & explore the power of data?

1. Start with a list of questions you would like answered
How many of your clients have a physician? Who is their provider? What percentage of your clients is that organization responsible for?

2. Start small...you’ll be encouraged by what you find
Even a few, basic questions can help you to learn more about your population and their needs

3. Start backing donor discussions with data
Using real-world data helps validate your organization’s messaging and elevate the demonstrated impact in conversations with donors, partners, staff, and volunteers alike
Q&A

What questions can we answer?