A Novel Approach to Analyzing Public Safety Risk and Best Practices

Tuesday, October 18th | 11:00 AM
A Novel Approach to Analyzing Public Safety Risk and Best Practices
Our Story Began One Year Ago

LMCIT and Benchmark embarked on a partnership to build and implement a data-driven risk management program to measurably improve the health, wellbeing and safety of police officers, agencies, and the communities they serve.

This program, called iMPACT, fuses data science with LMCIT’s loss control operations to:
- Predict likelihood of future claims and key risk factors for each member
- Identify evidence-based loss control best practices to mitigate these risks
- Build a compelling engagement model to inspire change and improve outcomes
Part 1: Analyzing Law Enforcement Risk

What percentage of our law enforcement claims could be influenced by loss control efforts?

- None - they’re all random events
- Less than 25%
- 25% to 50%
- 50% to 75%
- All of them
### Part 1: Expanding our Analytic Capabilities

<table>
<thead>
<tr>
<th>Analytic Capability</th>
<th>Benefits</th>
</tr>
</thead>
</table>
| **1. Claims Business Intelligence** | • Identify loss trends at pool and member level  
• Inform Loss Control (LC) program development to mitigate recurrence  
• Engage members through data insights |
| **2. Predictive Modeling**   | • Identify likelihood of future claims at a member level  
• Understand key risk factors for each member |
| **3. Risk Segmentation**     | • Easily assess member risk in context with peers  
• Elevate LC program to focus on most impactful interventions for each member |
| **4. Program Measurement**   | • Analyze benefit/ROI of overall LC program and specific initiatives  
• Accelerate time-to-benefit for new programs  
• Justify member and pool investment in proven interventions |
Part 1: Expanding our Analytic Capabilities

Visualization Helps us Better Understand Risk

Figure 1: iMPACT™ Interactive Risk Mapping Module
Mythbusters: Law Enforcement Risk Edition

A Tale of Two Cities

CITY 1 POLICE DEPARTMENT

- Loss per FTE: $104
- FTE Count: 51
- Claims per FTE: 0.26
- Predicted Severity: $5,312
- Frequency: 13.46
- Census Population: 40,731

CITY 2 POLICE DEPARTMENT

- Loss per FTE: $3,899
- FTE Count: 58
- Claims per FTE: 0.36
- Predicted Severity: $226,157
- Frequency: 21.11
- Census Population: 48,677

City 2 has 38x higher predicted workers comp risk per officer than City 1
Part 2: Engaging our Members

Next, we sought field level insights from our chiefs’ and city leaders’ perspective to validate key risk factors and identify interventions they have in practice:

- What are they most proud of?
- What keeps them up at night?
- What are top performers doing differently?
- How can these practices be replicated?
- Are chiefs and city leaders receptive to learn from and utilize analytic-driven insights?
Part 2: Engaging our Members

So we hit the road....

• What % of chiefs and city leaders accepted our invitation to participate in a 2-hour interview?

• How many miles did we drive this summer?

• What information did we seek from our members?*

* Pilot Survey Form Included with Session Documentation
Part 2: Engaging our Members

“It was great meeting with all of you and I hope this project is a success.”
– Chief, MSP Metro Region

“This [program] is badly needed. My industry is hurting. We need to change how we do things. We need the help.”
- Chief, Greater MN

“It was truly our pleasure meeting with all of you and I cannot thank you enough for taking the time to drive up here and meet with us. I am very excited about your work and look forward to hearing about your findings. I have been compiling several things your team requested and I will have them for you shortly. If there is anything else you need, don’t hesitate to ask.

Once again, we are honored to have been chosen to be part of this research project and thankful for your willingness to listen to frustrations.”
- Chief, Greater MN
Part 3: What We Heard

Our Law Enforcement professionals and their city leaders are carrying an increasingly heavy weight. We have to meet them more than halfway to help.
Part 4: What We Learned

- Our top-performing chiefs and their cities are innovating and adapting.
- Sharing their stories is empowering and gives hope.
- It also fuels our portfolio of interventions to measure and share.

Enhanced training / FTO Investment

Partnering with health system to increase mental health services & capacity

Leverage Tech in continuous improvement culture

Pay for wellness vs. longevity

Rethinking some high-risk activities

Culture as an asset
Part 4: What We Learned

Interventions Matter: Established Wellness Programs show strong significance to reduce both workers comp severity and liability severity.

### Workers Comp Severity

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Agencies</th>
<th>Total Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>$28,200</td>
<td>6</td>
<td>$507,600</td>
</tr>
<tr>
<td>After</td>
<td>$9,370</td>
<td></td>
<td>$168,660</td>
</tr>
<tr>
<td><strong>Total Savings for all sampled agencies</strong></td>
<td></td>
<td></td>
<td><strong>$338,940</strong></td>
</tr>
</tbody>
</table>

In first 3 years after implementation,

- **Average Savings for all agencies (per year)** $112,980
- **Average Savings per agency (over 3 years)** $56,490

### Liability Severity

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Agencies</th>
<th>Total Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>$16,100</td>
<td>6</td>
<td>$289,800</td>
</tr>
<tr>
<td>After</td>
<td>$404</td>
<td></td>
<td>7,272</td>
</tr>
<tr>
<td><strong>Total Savings for all sampled agencies</strong></td>
<td></td>
<td></td>
<td><strong>$282,528</strong></td>
</tr>
</tbody>
</table>

In first 3 years after implementation,

- **Average Savings for all agencies (per year)** $94,176
- **Average Savings per agency (over 3 years)** $47,088
**Part 4: What We Learned**

**Interventions Matter: Restrictive Pursuit Policy** shows strong significance to reduce both workers comp severity and liability severity

<table>
<thead>
<tr>
<th>Workers Comp Severity</th>
<th>Mean</th>
<th>Agencies</th>
<th>Total Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Policy</td>
<td>$109,000</td>
<td>8</td>
<td>$2,616,000</td>
</tr>
<tr>
<td>After Policy</td>
<td>$53,600</td>
<td></td>
<td>$1,286,400</td>
</tr>
<tr>
<td><strong>Total Savings</strong></td>
<td></td>
<td></td>
<td>$1,329,600</td>
</tr>
</tbody>
</table>

In first 3 years after implementation,
- **Average Savings for all agencies (per year)**: $443,200
- **Average Savings per agency (over 3 years)**: $166,200

<table>
<thead>
<tr>
<th>Liability Severity</th>
<th>Mean</th>
<th>Agencies</th>
<th>Total Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>$16,300</td>
<td>8</td>
<td>$391,200</td>
</tr>
<tr>
<td>After</td>
<td>$136</td>
<td></td>
<td>$3,264</td>
</tr>
<tr>
<td><strong>Total Savings</strong></td>
<td></td>
<td></td>
<td>$387,936</td>
</tr>
</tbody>
</table>

In first 3 years after implementation,
- **Average Savings for all agencies (per year)**: $129,312
- **Average Savings per agency (over 3 years)**: $48,492
Part 5: The Opportunity Ahead

Our program goal is to help each agency reduce risk by one level.

Achieving this objective will address up to 60% of our law enforcement claims.

Initial Focal Points:
- Work Comp / PTSD
- Work Comp / Injury
- Liability
Part 5: The Opportunity Ahead

Maximize program benefit to members by:

- Encouraging / supporting broader adoption of evidence-based practices and measuring results
- Advancing risk insights with new datasets (chief tenures, staff turnover, training, shifts, etc.)
- Expanding loss control research to new / complex areas (mental health, morale, engagement, etc.)
Closing Thoughts

• We can help our law enforcement partners measurably improve the health, wellbeing and safety of police officers, agencies, and the communities they serve by applying proven principles of a data-driven risk management process.

• Chiefs and City Administrative staff are willing participants in this program, and in many cases feel our work is critical to their future success.

• Evidence-based interventions matter and already exist at agencies across our state. Some are quick wins while others will require much deeper research, analysis and/or systemic support.
A Novel Approach to Analyzing Public Safety Risk and Best Practices

Lena Gould
Senior Business Analyst
lgould@lmc.org
p. 651-281-1245

Lora Setter
Public Safety Program Coordinator
lsetter@lmc.org
p. 612-248-9551

Steve Brewer
Partner, Risk Solutions
steven.brewer@benchmarkanalytics.com
m. 414-308-4837