



USING RISK-BASED MODELS TO DRIVE PROGRAM INTEGRITY EFFORTS

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A Heuristic Device

Model – think of it as an analogy or metaphor

- Heuristic possibilities
- Suggesting ways knowledge in one area of inquiry can be used in other areas of inquiry

Models are approximations – they have limitations

Relationship between model & observation is *partial*

(Kaplan & Manners, 1972)



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Effectively Using Risk Models

What risk models are for:

- Detection tools
- Identification:
 - Risk elements
 - Suspicious behaviors
 - Suspicious patterns
- Guiding investigations

What risk models are not for:

- Administrative complaints & sanction actions
- Credible allegations of fraud
- “Reliable evidence” of fraud or abuse
- Probable Cause



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Sources of Information & Intelligence

- Location addresses, telephone, & email
- Geospatial analysis & mapping
- Open Source Intelligence (OSINT) & online social media
- Financial records, contracts, & applications
- Medical records & health information
- MMIS data, provider & recipient information, claims



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Methodology & Approach

- Observations and data leads
- Preliminary research
- Case studies
- Concept Mapping
- Link analysis
- Exploratory data analysis
- Additional research
 - Case-control studies
 - Pilot projects
 - Grounded theory
- Model development & refinement
- Data visualizations & refinement



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Grounded Theory Approach

- **Grounded Theory**
 - Systematic, mixed-method research methodology
 - Evaluation of data
 - Grouping of similar concepts & categories
 - Formulates hypotheses based on conceptual ideas
- **Process:**
 - Coding & “Memoing”
 - Sorting
 - Analysis and report writing



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Interdisciplinary Team

- Investigators & auditors
- Data scientists
- RHIA & CPC
- GIS specialist
- Actuary & statistician
- Digital forensics specialist
- Clinical pharmacists
- Law enforcement officers
- Prosecutors & attorneys



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The Tools

- F.A.C.T.S. – MPI case tracking system
- SQL
- Python & R
- Oracle Business Objects/DSS
- ESRI ArcGIS
- Maltego CaseFile
- IBM I-2 Analyst Notebook
- LifeRaft Navigator
- Tableau



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BA Risk Model Components

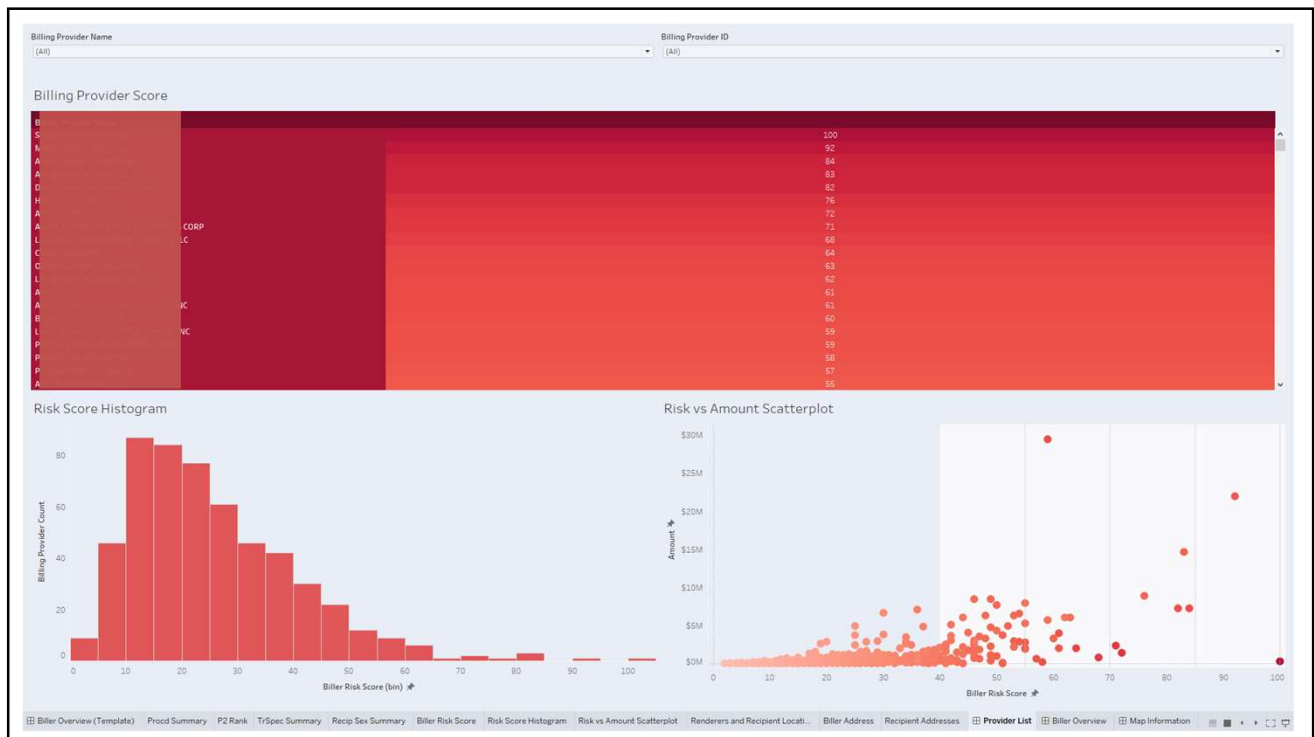
• Biller Scores

- Renderer impossible/excessive days & count of renderers with issues
- Recipient impossible/excessive days/weeks
- Renderer consecutive days
- Renderers with payment restrictions
- Unqualified renderers
- Renderers with BGS flags
- Renderers who are recipients
- Average risk of renderers
- Count of renderers with risk score outliers

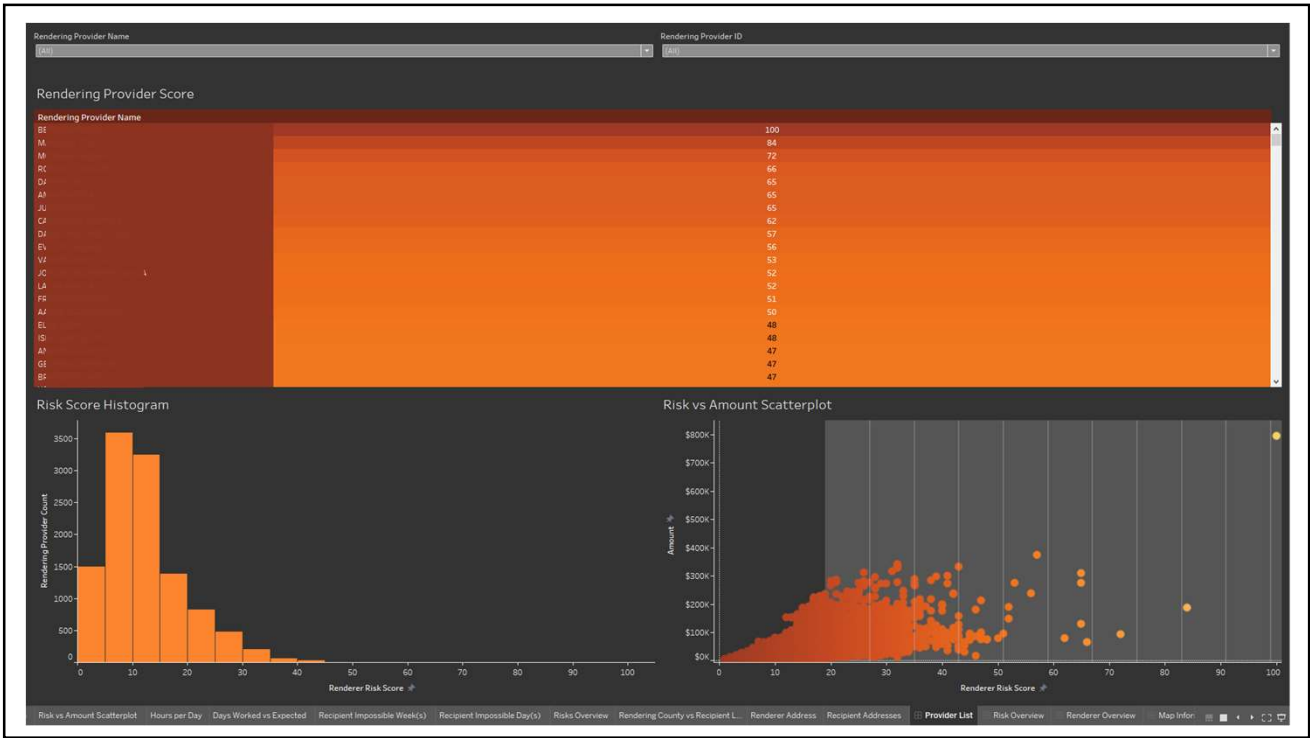
• Renderer Scores

- Provider/recipient Same Time
- BGS Risks
- Distance to recipients
- Unqualified
- Impossible/excessive days
- Recipient impossible/excessive days/weeks
- Multiple billers
- Consecutive days worked
- Number of days worked compared to expected

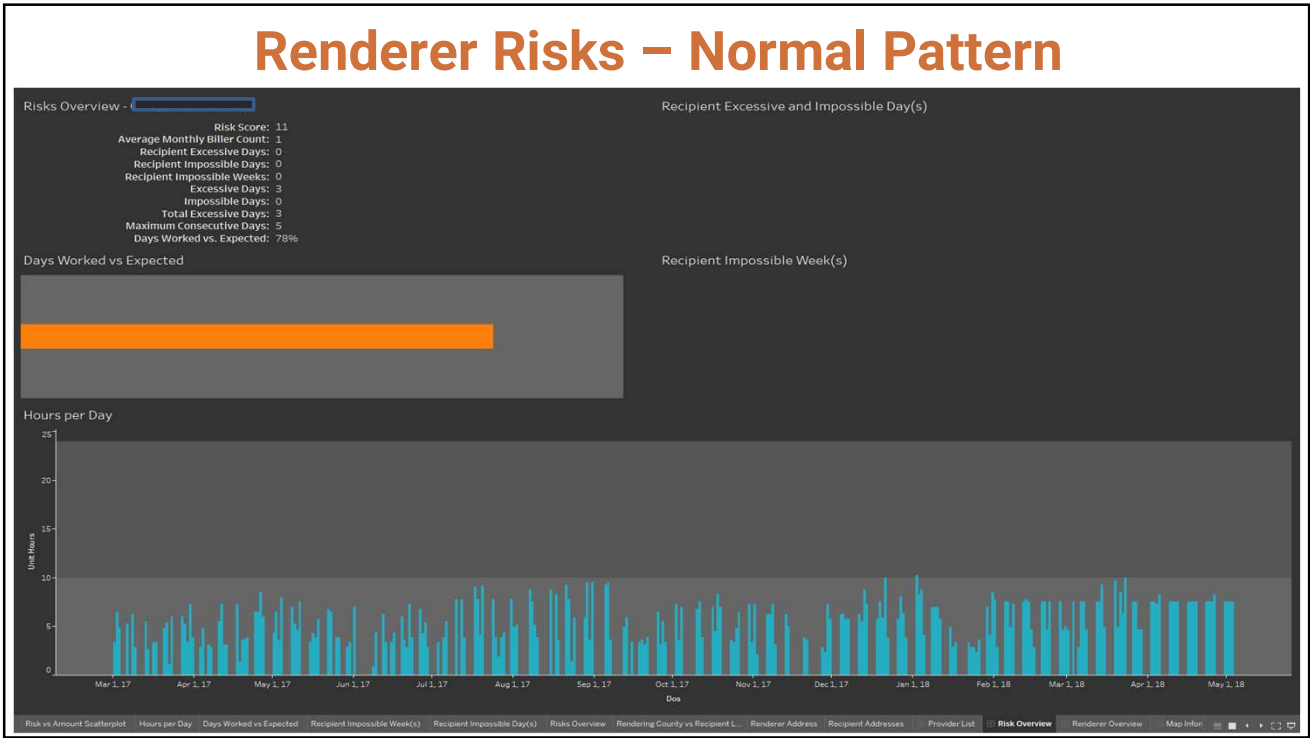
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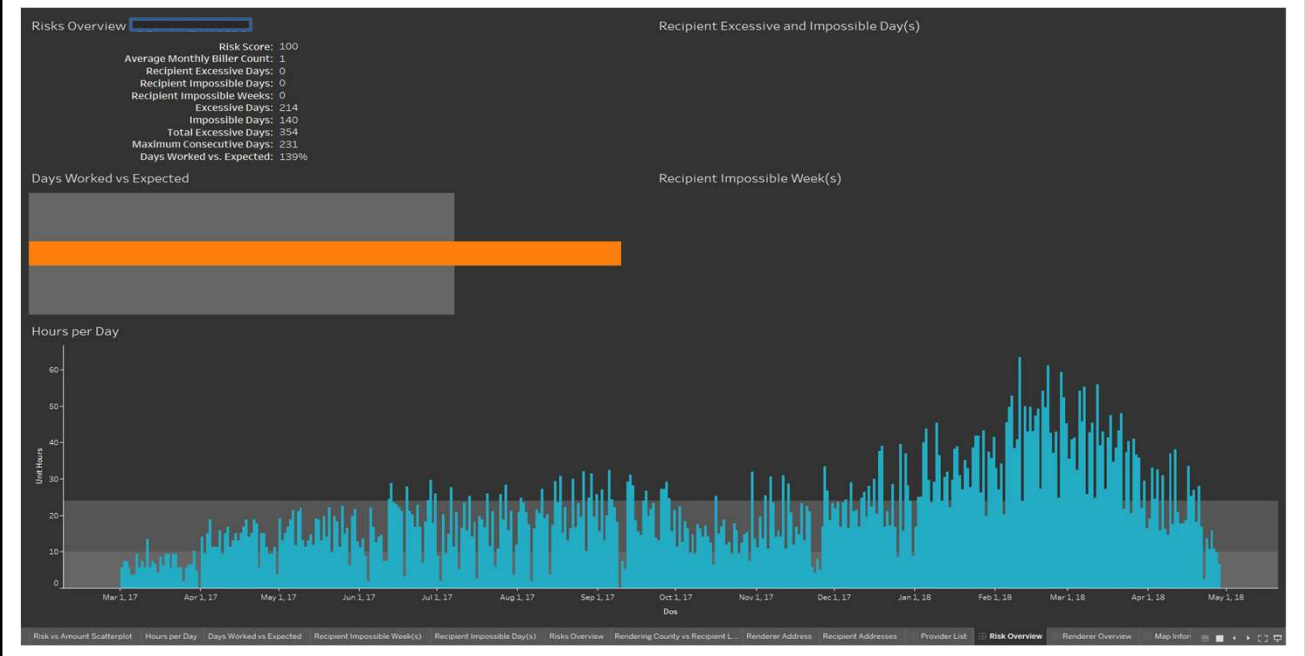


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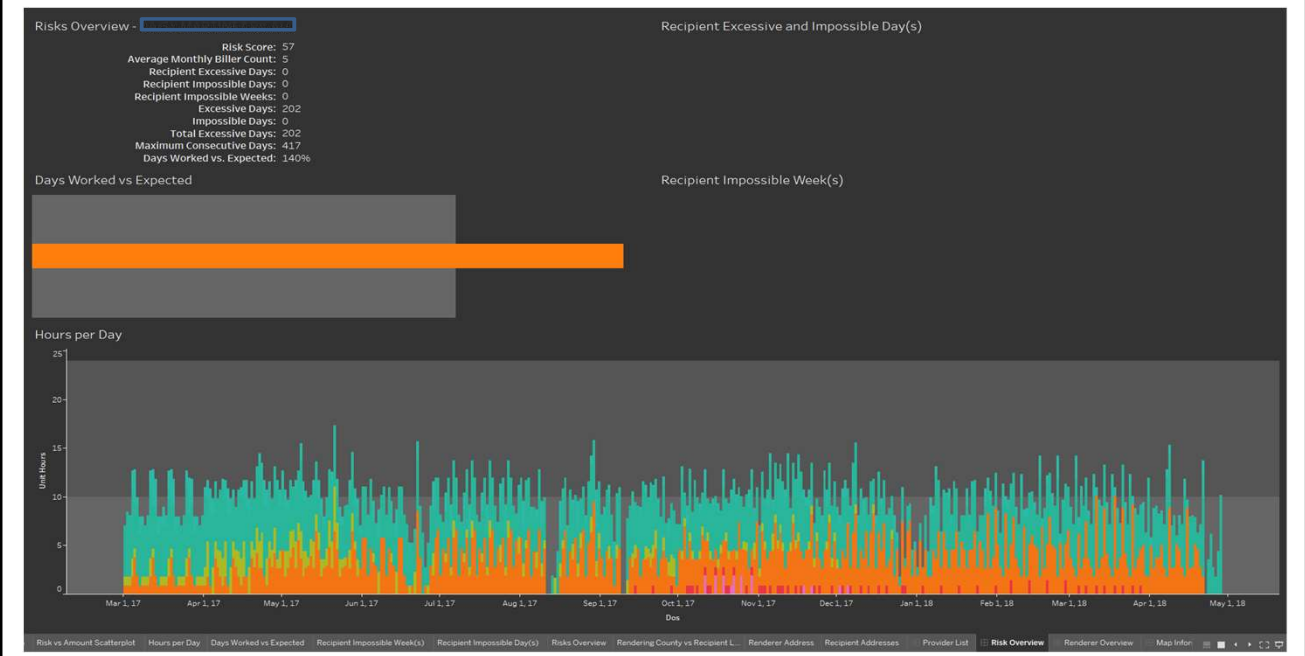
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Renderer Risks – Impossible Hours

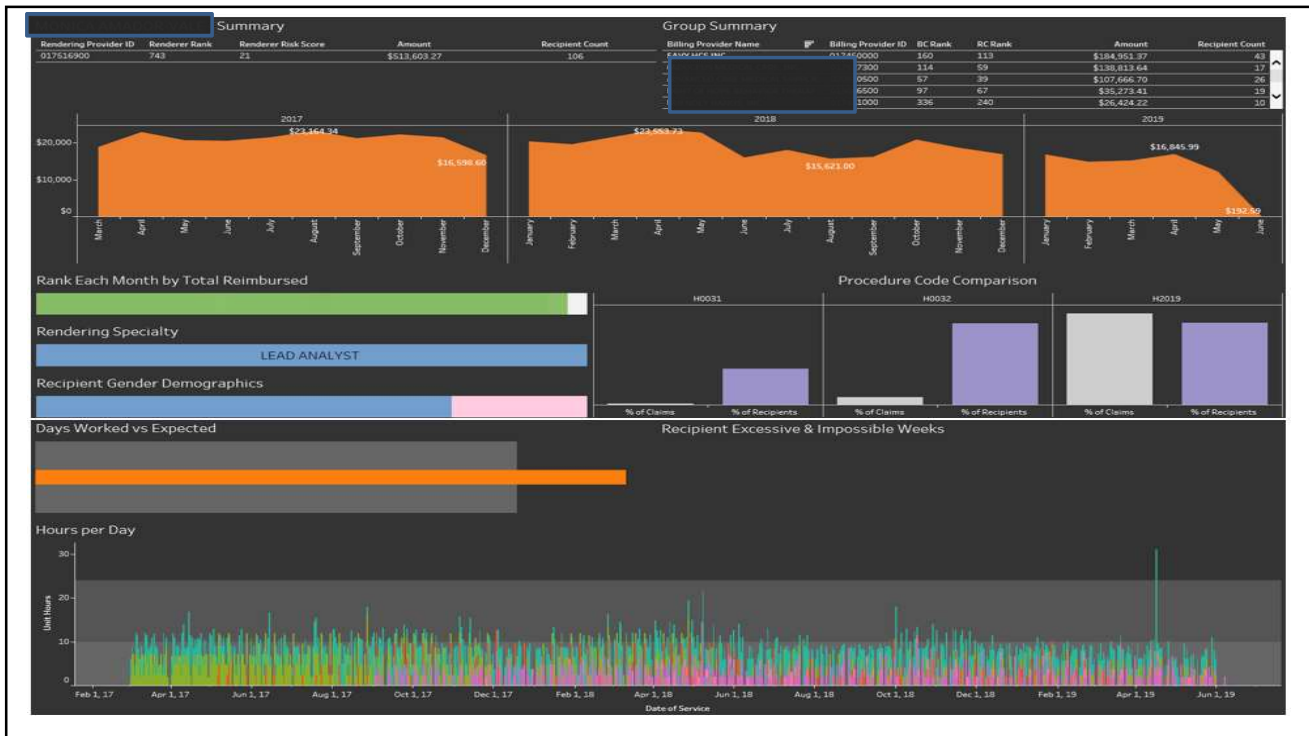


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Renderer Risks – Multiple Billers



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NAMPI 2019 AUGUST 23-26, 2019 ATLANTA, GEORGIA **Provider Qualifications Review**

- **Movie Studio Case Mgmt. & Behavioral Analysis**
 - 32 unqualified individuals
 - ~\$1,050,000 overpayment
 - Repayment agreement
 - 10% interest
 - 6 installments
 - \$178,000+ each

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Billing “Irregularities”

- **Biller Impossible/Excessive Days:**
 - 665+ occasions (days), billers billed for a renderer >24 hours
 - On 85,000+ occasions, billers billed for a renderer >10 hours but <24 hrs.
 - On 20 occasions (days), billers billed for a recipient >24 hours
 - On 20,000+ occasions, billers billed for a recipient >8 hours but <24 hrs.



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Suspicious Observations

- **BA providers who are Medicaid recipients:**
 - 1,200+ identified
 - \$40+ million reimbursements as providers
 - 1 individual -- >\$500,000 reimbursed
 - 30 individuals -- > \$250,000 reimbursed
 - 50 individuals -- >\$100,000 - \$200,000
 - 175 individuals -- \$50,000 - \$100,000



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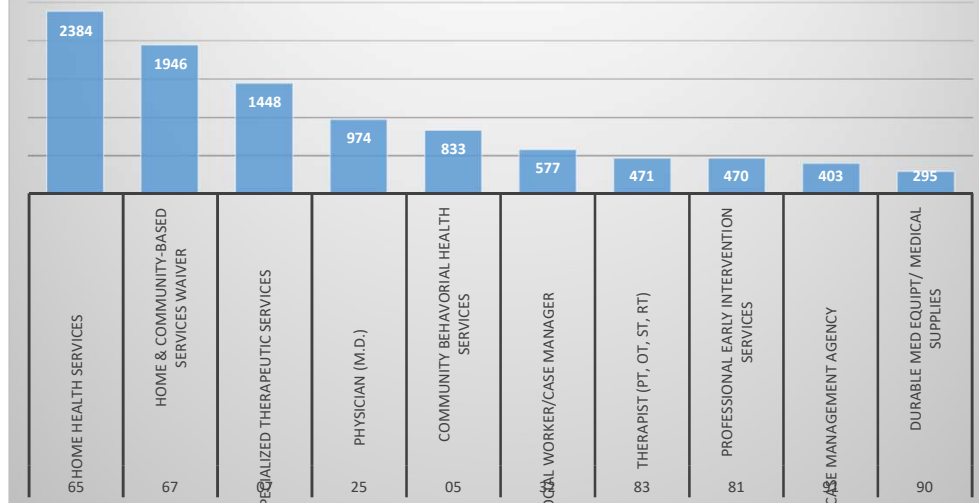
Suspicious Locations & Associations

- BA provider & BA recipient same home address
 - 100+ identified at same street address / apartment building
 - \$2.1+ million
- BA provider in same family as BA recipient
 - ~680 identified
- BA provider owners & other provider types
 - thousands identified & under review

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Other Associated Provider Types

Count of Tax ID Links to Behavior Analysis Providers by Provider Type



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Enforcement Activities

- 115 BA providers referred to MFCU
- Overpayment recovery audits completed or in process:
 - 551 BA providers
 - 100+ cases are closed and overpayments exceed \$10.8 million
- Sanctions imposed or in process for over 60 providers
- ~125 cases are under active investigation
- \$26.3 million in potential overpayments under review



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Strategies for Success

- **The Approach:**
 - Innovation
 - Transparency
 - Teamwork
 - Collaboration
- **The Objectives:**
 - Process improvements, efficiency, results
 - Feedback loop to improve/refine models



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Why We Use Risk Models

- Magnitude of the Medicaid program
- Broad program integrity issues
- Limitations on staffing resources
- Limitations on technical resources
- Scope of authority



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