HCIL Partnership with Pulse8

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A Maryland Industrial Partnerships (MIPS) project
www.mtech.umd.edu/mips/

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www.cs.umd.edu/hcil/eventflow/workshop2014/
Pulse8 offers analytical decision support tools to support health plans with risk adjustment and medical coding (that is necessary for financial reimbursement)
About Us

Mission and Values

• To reimagine data to help people live healthy and independent lives through the execution of sophisticated analytics, predictive techniques, and data collection tools.

• To deploy sophisticated analytic systems that improve payer financial performance generating significant ROI.

• To better the lives of people by transforming traditional methodologies into multidimensional products and solutions in an evolving and complex healthcare landscape.

  To Pulse8, every number is a life.™

Visualization and Reporting/Dashboard

Risk Adjustment and Predictive Analytics

Health System Integration

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Tier 2+ Telco Carrier Grade **Datacenter**
Headquartered in Annapolis, Maryland

**Securely View Business Intelligence Results**

**HIPAA Compliant Security**

- GxP Qualified Facility
- Full GAMP5 based Quality System
- Monitored 24/7 with Three-Tier Restricted Physical Access Protocol
- Redundant Network and Dual Physical Fiber Paths from Multiple POPs
- Staffed by CISA/CRISC’s
- EHNAC Approved
- All data transfers are encrypted either through sFTP, pgp encryption on the files themselves, or both.
Offering Independent and Unbiased Results

The Risk Adjustment Suite™

- Delivers instant and immediate visibility into Commercial and MA Populations.

- Proprietary algorithms analyze claims data to make predictions about what individual member requires next, ultimately closing gaps in care and increasing accuracy in risk factor.

- Products go beyond traditional methods and provide innovative and unique methodologies.

- Proprietary Risk Adjustment Analytics and Modeling, Provider and Member Profiling, and Data Collection Tools to help improve risk factor performance.
Suspecting algorithms find records with likely coding gaps

Consider gap closure intervention from letter to patient... to sending coder to Dr. office

Current practices often wasteful
Gap close naturally when the patient re-visits health system
Focus on expensive methods
EventFlow **opportunities:**

- **Review** the raw claim data
- **Improve** the “suspecting algorithms” e.g. add temporal rules
- **Understand** cases of natural gap closure
- **Evaluate** effectiveness of interventions
Success Hinges on Innovation

Performance of Independent and Unbiased Programs Deployed for Revenue Optimization

Close Data Loop
Deployment of advanced data strategies captures critical data sources, such as member-reported data, consumer data, and non-traditional data

Achieve Speed and Transparency
Transparent, interactive and flexible business intelligence visualization and reporting tools allows for adjustments throughout program for optimal performance

Prevent Unnecessary Interventions
Deploy best in class risk adjustment algorithms to eliminate 40-60% of wasteful interventions

Effective Targeting
Leading-edge stratification and targeting drives least costly interventions to close gaps, avoid waste, and improve financial performance

Validate Performance
Algorithms, associations, and business rules

Compliance, Risk Accuracy and Audit Readiness
Advance Notice, Submission and RADV
Example: Leveraging Lifestyle Data

Context is King When Predicting Likelihood of Uncoded Conditions

**Traditional Claims Data**
- **Household:** Policyholder and spouse reside together, both in late fifties
- **Patient:** Male
  - HCCs confirmed: hyperlipidemia, hypertension
  - Labs ordered include HbA1Cs, 1 and 2-hour fasting glucose tolerance tests – but results not provided
  - No diabetic meds like Metformin

**Suspected:**
- Diabetes without Complications (HCC 21)

**Additional Lifestyle Information**
- Owns home, likely college graduates
- Both subscribe to magazines involving fitness, biking, skiing
- New subscription for low carb cooking
- Preferred vacations are to ski resorts and national parks

**Inferences**
- Subscriptions and vacations imply active lifestyles
- Magazine for low carb cooking suggests active management of risk factors, including hypertension and hyperlipidemia
- Glucose-related testing more likely to be watchful waiting than to confirm diabetes

Benefit: Lifestyle data increases our confidence in targeting member opportunity avoiding a wasteful intervention.
Modern Informatics and Visual Analytics

Effective Analytics:

• Persisting algorithms—chronic diseases documented at one time identify gaps.

• Predictive and Suspecting algorithms—undocumented conditions found through associations with other data (e.g., procedures, drugs)

Prevent Unnecessary Interventions:

• Protect care management dollars through utilization of better data and analytics

• Improve targeting in a climate of anticipated high attrition

• Appropriately deploy care management interventions (manage with speed)

Analytics: Creative use of statistical/data mining tool, visualization science, and databases

Health Informatics: Computer science, organizational behavior, and medical terminologies

Benefit: Improve confidence and precision in provider and member targeting.
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