Patient Attribution Algorithm

Industry:

Healthcare

Client:

Mid-sized Healthcare Company

Location: U.S.A

CHALLENGE

Payers need to identify which provider is responsible for a patient in order to measure the quality and the cost of care provided. Often, this process is complicated since most payers attribute patients to Primary Care Physicians (PCPs), but patients with chronic or urgent conditions may visit a Specialist Physician more than they visit a PCP. Patients who are on Preferred Provider Organization (PPO) plans can change their preferred providers whenever they prefer. Most attribution depends on retrospective data, usually from the past 12 months. This makes it difficult for physicians to predict and address patient needs in the year ahead. Patient populations in a hospital are not always assigned to a PCP, so our approach was to define the attribution rules for a physician based on factors such as physician's specialty and the number of times a patient visited the physician's office in the past 2 to 3 years.

SOLUTION

Our team implemented an algorithm to attribute the patient to the hospital's list of PCPs. For each patient, we counted the number of outpatient office visits within the last 24 to 36 months to the following physicians: Family Practice, General Internal Medicine, General Pediatrics, Geriatric Medicine, or Preventive Medicine. Then, we assigned the patient to the physician with the highest count of office visits. This attribution algorithm can also be replicated to a specialist physician such as a Cardiologist.

Case Study

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TECHNOLOGY STACK

IBM Netezza (Enterprise Data Warehouse)

ETL (Data Stage)

Aginity Workbench

Tableau Reports

BENEFITS

- Primary Care Physicians (PCPs) can proactively conduct patient outreach programs.

- Primary Care Practice can use the attribution to manage the patient population effectively.

- Following reports were developed for the Director of Primary Care Practice:

    - Report 1: The list of patients who are not attributed to a PCP. The categories included no qualifying PCP and no qualifying encounters in the past 24 to 36 months.

    - Report 2: The list of physicians that have been identified as potential PCPs based on their specialty but do not have any attributed patients.

    - Report 3: Comparison report showing the patients who already had assigned PCPs and the patients who have been assigned to PCPs derived using this attribution algorithm.

Case Study