Analyzing Baseline Compliance on Four Healthcare Effectiveness Data Information Set (HEDIS) Quality Measures in Diabetic Population

Jessica Berman
Lehigh Valley Health Network

Alexandra Cline BSN. RN
Lehigh Valley Health Network, alexandra.cline@lvhn.orgAl

Lori Piltz MSN, BSN, RN
Lehigh Valley Health Network, Lori.Piltz@lvhn.org

Published In/Presented At

Berman, J., Cline, A., & Piltz, L. (2023, July 28). **Analyzing Baseline Compliance on Four Healthcare Effectiveness Data Information Set (HEDIS) Quality Measures in Diabetic Population**. Poster presented at Research Scholars, Lehigh Valley Health Network, Center Valley, PA.

Analyzing Baseline Compliance on Four Healthcare Effectiveness Data Information Set (HEDIS) Quality Measures in Diabetic Population

Jessica Berman; Alex Cline BSN, RN; Lori Piltz MSN, BS, RN

Lehigh Valley Health Network, Allentown, Pennsylvania

BACKGROUND & PURPOSE

- Diabetes is a chronic disease distinguished by elevated blood glucose levels and is the 8th leading cause of death in the United States (US)[1]
- 37 million people in the US (11.3% of population) have diabetes[2]
- $1 out of every $4 in US healthcare costs is spent on diabetes care[3]
- The total annual cost of diabetes in the US is ~ $327 billion[3]
- Purpose: identify areas of opportunity to design interventions for diabetic population based off the following targeted HEDIS Quality Measures (QM):
  1. Adults Access to Preventative/Ambulatory Health Services (AAP)
  2. Eye Exams for Patients with Diabetes (EED)
  3. Hemoglobin A1c Control for Patients (Pts) with Diabetes (HBD)
  4. Kidney Health Evaluations for Patients with Diabetes (KED)

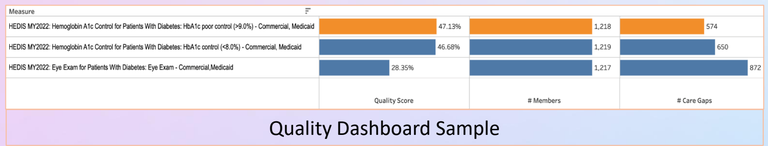
METHODS

Quality Dashboard

- Stratified and extracted insurance claims data for targeted QMs
  - Populytics data from January 1, 2023 - April 30, 2023
- Total Population: Aetna, CBC, Cigna, HMK, and LVHN
  - Commercial, Medicaid, Medicare

Baseline Compliance Guide

- Statistical Analysis
  - Compliance rates (%)
  - Risk profiles (#)
  - Care gaps (#)
- Supporting graphs and charts
  - Total population vs. LVHN
- Interpretations and recommendations
- Limitations and implications
- Recommendations and questions for future analysis



Quality Dashboard Sample

RESULTS

AAP: Total Population (n = 61704)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial: Ages 20-44	21711	100	.005
Commercial: Ages 45-64	28876	100	0
Commercial: Ages 65+	4482	99.98	.022
Medicare, Medicaid: Ages 65+	6635	78.81	21.19

AAP: LVHN Alone (n = 11399)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial: Ages 20-44	5194	100	0
Commercial: Ages 45-64	5274	100	0
Commercial: Ages 65+	931	100	0

EED: Total Population (n = 7163)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid	6214	29.67	70.33
Medicare	949	38.99	61.01

EED: LVHN Alone (n = 1217)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid	1217	28.35	71.65

HBD Well Controlled (< 8%): Total Population (n = 7174)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid	6223	42.92	57.08
Medicare	951	47.63	52.37

HBD Well Controlled (< 8%): LVHN Alone (n = 1219)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid	1219	46.68	53.32

HBD Poor Controlled (> 9%): Total Population (n = 7169)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid	6217	49.70	49.70
Medicare	952	44.75	44.75

HBD Poor Controlled (> 9%): LVHN Alone (n = 1218)

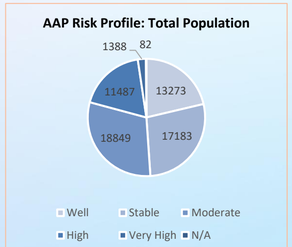
Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid	1218	47.13	47.13

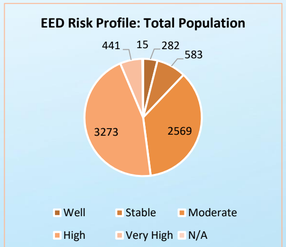
KED: Total Population (n = 7510)

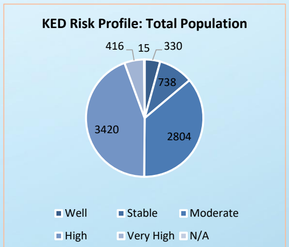
Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid: Ages 18-64	5252	24.07	75.93
Commercial, Medicaid: Ages 65-74	905	30.17	69.83
Medicare: Ages 65-74	720	28.75	71.25
Medicare: Ages 75-85	633	23.54	76.46

KED: LVHN Alone (n = 1027)

Demographic	n	Compliance Rate (%)	Care Gaps (Per 100 Pts)
Commercial, Medicaid: Ages 18-64	1027	23.08	76.92







CONCLUSIONS & LIMITATIONS

- AAP overall had the highest compliance rates compared to other QMs
  - LVHN is strong in this QM with zero care gaps among all demographics
- EED: total population Commercial and Medicaid had a lower compliance rate than Medicare
  - LVHN had a lower compliance rate and higher care gaps compared to total population
  - Most patients fell into the "high" risk group
  - Limitation: secondary eye insurance plans for eye care → falsely lower compliance rates
- HBD Well: total population Commercial and Medicaid had a lower compliance rate than Medicare
  - LVHN alone had a higher compliance rate and lower care gaps compared to total population Commercial and Medicaid
- HBD Poor: lower/more optimal compliance rate for Medicare than Commercial and Medicaid
  - LVHN alone had a lower compliance rate and lower care gaps compared to total population Commercial and Medicaid (lower compliance rate = better performance for this QM)
- KED overall had the lowest compliance rates compared to other QMs
  - LVHN had a lower compliance rate and higher care gaps compared to total population
  - Most patients fell into the "high" risk group
  - Limitation: updated HEDIS guideline now requiring both glomerular filtration rate and urine albumin-creatinine ratio exams

FUTURE DIRECTIONS & RECOMMENDATIONS

- Areas of opportunity: EED and KED; secondary and tertiary prevention[4]
- Analyze case studies of successful primary/secondary/tertiary prevention strategies to implement in future Populytics interventions
- Use LVHN patients as pilot group for future Populytics interventions
- Program quality dashboard to adjust for varying population sizes

Primary Prevention

Preventing disease from ever occurring

Example: educate population on healthy lifestyle habits

Secondary Prevention

Screening for early disease detection

Example: hemoglobin A1c testing, eye exams, kidney evaluations

Tertiary Prevention

Managing effects of disease post intervention

Example: diabetes management programs

Special thank you to LVHN, Populytics, and my wonderful Project Mentors

Please Scan to View Baseline Compliance Guide

[1] Centers for Disease Control and Prevention. (2023, January 18). Leading Causes of Death. Cdc.gov. https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm
[2] American Diabetes Association. (2022, July 28). Statistics About Diabetes. Diabetes.org. https://diabetes.org/about-us/statistics/about-diabetes
[3] Centers for Disease Control and Prevention. (2022, December 21). Health and Economic Benefits of Diabetes Interventions. Cdc.gov. https://www.cdc.gov/chronicdisease/programs-impact/pop/diabetes.htm#:~:text=Diabetes %20is%20the%20most%20expensive%20chronic%20condition%20in%20our%20nation.&text=%241%20out%20of%20every%20%244,caring%20for%20people%20with%20diabetes.&text=%24237%20billion%E2%80%A1(a)%20is,(a)%20on%20reduced%20productivity.
[4] Institute for Work & Health. (2015, April). Primary, Secondary and Tertiary Prevention. Iwh.on.ca. https://www.iwh.on.ca/what-researchers-mean-by/primary-secondary-and-tertiary-prevention#:~:text=If%20you%20set%20up%20programs,rashes%20as%20best%20as%20possible.

Populytics® How Healthier Happens

LVHN.org

Lehigh Valley Health Network