# SOCIOECONOMIC STATUS AND ANTIDIABETIC DRUG PRESCRIPTION IN COMORBID COPD PATIENTS

RT Campbell (MD, SOM), G Kinney, and K Young

Department of Epidemiology, Colorado School of Public Health, University of Colorado, Aurora, Colorado

University of Colorado Anschutz Medical Campus

## Background

- COPD and T2DM are highly comorbid
- Cost is included in prescription algorithms
- Antidiabetic medication has wide range of cost
- T2DM medication shown to decrease COPD exacerbation
- Hypothesis: If cost is considered in T2DM treatment algorithms, then SES categories will be correlated to prescription type

## Methods

- COMIRB Approval
- Identify COPDgene patients with prescriptions
- Divide 854 patients into 3 SES groups
- Exclude insurance coverage as variable
- Create tables with SES group v. prescription type
- Student SAS using FREQ to identify differences

## Data

| | | Drug Class | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Insulin | Biguanides | Bromocriptine | Thiazolidinediones | Sulfonylureas | Meglitinides | AGIS | Incretinmimetics | IPAS | Amylin Analogues |
| School Completed | 8th grade or less | 0 (-) | 19 (90.48) | 0 (-) | 2 (9.52) | 7 (33.33) | 0 (-) | (-) | 0 (-) | 1 (4.76) | 0 (-) |
| | High school No diploma | 15 (16.85) | 59 (66.29) | 0 (-) | 7 (7.87) | 34 (38.20) | 3 (3.37) | 0 (-) | 1 (1.12) | 2 (2.25) | 0 (-) |
| | Completed High School/GED | 32 (14.29) | 159 (70.98) | 0 (-) | 18 (8.04) | 90 (40.18) | 1 (0.45) | 1 (0.45) | 3 (1.34) | 6 (2.68) | 0 (-) |
| | Some college or technical school | 31 (14.35) | 166 (76.85) | 0 (-) | 18 (8.33) | 70 (32.41) | 2 (0.93) | 1 (0.46) | 3 (1.39) | 10 (4.63) | 0 (-) |
| | College or technical school graduate | 20 (10.15) | 155 (78.68) | 0 (-) | 28 (14.21) | 58 (29.44) | 8 (4.06) | 0 (-) | 9 (4.57) | 4 (2.03) | 1 (0.51) |
| | Masters/Doctoral Degree | 6 (6.12) | 79 (80.61) | 0 (-) | 19 (19.39) | 28 (28.57) | 1 (1.02) | 1 (1.02) | 1 (1.02) | 5 (5.10) | 0 (-) |

| | | Drug Class | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Insulin | Biguanides | Bromocriptine | Thiazolidinediones | Sulfonylureas | Meglitinides | AGIS | Incretinmimetics | IPAS | Amylin Analogues |
| Income | < 15,000 | 37 (18.41) | 160 (79.60) | 0 (-) | 4 (1.99) | 62 (30.85) | 0 (-) | 0 (-) | 3 (1.49) | 10 (4.98) | 0 (-) |
| | 15-30,000 | 29 (16.96) | 148 (86.55) | 0 (-) | 5 (2.92) | 55 (32.16) | 3 (1.75) | 2 (1.17) | 4 (2.34) | 16 (9.36) | 1 0.58 |
| | 30-50,000 | 15 (15.46) | 84 (86.60) | 0 (-) | 1 (1.03) | 34 (35.05) | 0 (-) | 0 (-) | 2 (2.06) | 4 (4.12) | 0 (-) |
| | 50-75,000 | 16 (19.05) | 73 (86.90) | 0 (-) | 2 (2.38) | 29 (34.52) | 1 (1.19) | 0 (-) | 1 (1.19) | 4 (4.76) | 0 (-) |
| | >75,000 | 6 (8.7) | 60 (86.96) | 0 (-) | 4 (5.80) | 16 (23.19) | 1 (1.45) | 1 (1.45) | 6 (8.7) | 6 (8.70) | 0 (-) |

| | | Drug Class | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Insulin | Biguanides | Bromocriptine | Thiazolidinediones | Sulfonylureas | Meglitinides | AGIS | Incretinmimetics | IPAS | Amylin Analogues |
| Drug Cost Covered | All | 4 (12.50) | 29 (90.63) | 0 (-) | 3 (9.38) | 9 (28.13) | 0 (-) | 0 (-) | 0 (-) | 0 (-) | 0 (-) |
| | Most | 3 (11.54) | 20 (76.92) | 0 (-) | 0 (-) | 11 (42.31) | 0 (-) | 0 (-) | 4 (15.38) | 0 (-) | 0 (-) |
| | Some | 27 (18.62) | 117 (80.69) | 0 (-) | 5 (3.45) | 55 (37.93) | 1 0.69 | 0 (-) | 5 (3.45) | 14 (9.66) | 0 (-) |
| | Little | 66 (17.28) | 327 (85.60) | 0 (-) | 9 (2.36) | 112 (29.32) | 3 0.79 | 1 (0.26) | 9 (2.36) | 22 (5.76) | 1 (0.26) |
| | No | 25 (15.92) | 133 (84.71) | 0 (-) | 3 (1.91) | 42 (26.75) | 1 0.64 | 2 (1.27) | 1 (0.64) | 9 (5.73) | 0 (-) |

## Conclusions

- No significant differences ($p < 0.05$) P= 0.51, 0.51, 0.81
- Hypothesis not supported
- Additional adjustments for age, race, sex
- High insurance coverage
- Dual/triple therapy

## Discussion

- Cost consideration may not affect prescription
- Metformin is first line, effective, cheap
- Group size discrepancies
- New medications less frequent
- Health insurance coverage
- Diabetes specific cohort
- Do newer drugs show similar effect as older?
- Bromocriptine differing mechanism

## Disclosures

There are no conflicts of interest.

## References

SCAN ME