Secondary Stroke Prevention Among Filipinos Compared with Other Racial Groups in Hawaii

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Abstract

Purpose/Background: As the fifth leading cause of death in the United States and a main cause of disability, stroke results in immense health and economic burden. Filipinos (FI) were found to have the highest mortality due to major CVD and stroke in Hawaii, and it is unclear whether the increased stroke risk among FI might be reduced by increasing the use of guideline recommended medications for secondary stroke prevention. Additionally, the attitudes and concerns of FI patients in Hawaii regarding stroke prevention have not been studied. The purpose of this study is to utilize a mixed-method approach to elucidate health disparities in FI after stroke compared with other racial groups in Hawaii, Whites, other Asians, Native Hawaiian and other Pacific Islanders (NHOPI) and other race.

Materials & Methods: The Get With the Guidelines – Stroke (GWTG-Stroke) data from The Queen's Medical Center (QMC) will be used to identify patients hospitalized for stroke from years 2006-2016. Subjects will be excluded if diagnosed with non-ischemic stroke and with disposition other than home. Multivariable logistic regression models will examine differences in appropriate medication use at discharge related to race/ethnicity, controlling for age, sex, insurance, prior use of medications, and stroke risk factors. Additionally, semi-structured key informant interviews will be conducted among FI and other stroke patients from QMC. Transcripts from the interviews will be reviewed, coded, and interpreted for congruent themes.

Results: Preliminary results from the GWTG-Stroke 2013 to 2016 data identified a total of 3574 stroke patients. After meeting inclusion criteria, a total of 1489 subjects were identified. The subjects included 398 Whites, 191 FI, 528 other Asian, 346 NHOPI, and 26 other race. At baseline, there was no difference in the average age of FI compared with Whites (66 vs 67 years old, respectively, P=0.15); however, other Asians (70 years old, P=0.002) were older, and NHOPI (60 years old, P<0.001) were younger than Whites. Furthermore, FI, other Asians, and NHOPI had significantly higher rates of hypertension, diabetes mellitus, and dyslipidemia than Whites. Multivariable logistic regression results showed no statistically significant racial difference in prescribing of antithrombotics or statins at discharge. Age [OR=0.97; 95% CI (0.95, 0.995)], however, was a negative predictor of antithrombotic prescription, and being female [OR=0.68; 95% CI (0.51, 0.90)] was associated with lower rates of statin prescription on discharge (Table 1).

Discussion/Conclusion: Analyses of data from a large hospital in Hawaii from 2013 to 2016 found race was not associated with prescribing differences for the guideline recommended medications for secondary stroke prevention. Further study is needed to better understand why female gender was associated with fewer statin prescriptions. The pending results of the key informant interviews may shed light on the attitudes and concerns regarding stroke prevention among FI and other racial groups in Hawaii.

Keywords

Stroke Prevention; Filipinos; Health Disparities; Hawaii

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Table 1. Race/ethnicity as predictors of secondary stroke prevention medication prescriptions on discharge

	Model 1 Odds Ratio (95% CI)		Model 2 Odds Ratio (95% CI)		Model 3 Odds Ratio (95% CI)		Model 4 Odds Ratio (95% CI)	
	Antithrombotic	Statin	Antithrombotic	Statin	Antithrombotic	Statin	Antithrombotic	Statin
Race/ethnicity (reference = White)								
Filipino	0.90 (0.40, 2.06)	1.99 (1.26, 3.15)*	0.87 (0.38, 1.99)	1.99 (1.26, 3.15)*	0.88 (0.38, 2.03)	2.00 (1.26, 3.17)*	0.91 (0.39, 2.09)	1.64 (1.01, 2.65)*
Other Asian	1.27 (0.64, 2.49)	1.41 (1.03, 1.93)*	1.37 (0.70, 2.72)	1.41 (1.03, 1.93)*	1.40 (0.71, 2.77)	1.44 (1.05, 1.97)*	1.43 (0.72, 2.85)	1.29 (0.93, 1.79)
NHOPI	1.89 (0.80, 4.42)	2.32 (1.57, 3.44)*	1.58 (0.66, 3.76)	2.32 (1.57, 3.44)*	1.68 (0.70, 4.02)	2.43 (1.64, 3.62)*	1.55 (0.65, 3.71)	2.00 (1.33, 3.01)*
Other	1.12 (0.14, 8.73)	1.90 (0.64, 5.66)	0.97 (0.12, 7.65)	1.90 (0.64, 5.66)	0.91 (0.11, 7.16)	1.83 (0.61, 5.45)	0.93 (0.12, 7.41)	1.51 (0.49, 4.66)
Age			0.98 (0.96, 0.997)*	1.003 (0.99, 1.01)	0.98 (0.96, 0.999)*	1.01 (0.996, 1.02)	0.97 (0.95, 0.995)*	1.00 (0.99, 1.004)
Female					0.68 (0.38, 1.19)	0.70 (0.53, 0.91)*	0.68 (0.39, 1.21)	0.68 (0.51, 0.90)*
No insurance					9.77 (0.17, 3.36)	1.62 (0.72, 3.66)	0.82 (0.19, 3.60)	1.97 (0.86, 4.50)
Prior Antithrombotics							2.10 (1.11, 3.98)*	-
Prior anti-cholesterol							-	3.70 (2.46, 5.56)*
Atrial fibrillation/Flutter							0.65 (0.32, 1.35)	1.67 (1.19, 2.35)*
CAD or prior MI							2.09 (0.73, 6.03)	0.88 (0.57, 1.36)
Carctid stenosis							1.22 (0.16, 9.41)	1.56 (0.53, 4.59)