

SUPPLEMENTARY DATA

**Supplementary Table 1.** Factors Independently Associated with Diabetes Processes of Care.

Patient Characteristic	Laboratory Testing		Examination		Vaccination	
	A1C	LDL	Foot	Retinal	Influenza	Pneumococcal
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Black race ( <i>ref</i> = non-Hispanic white)	0.57 (0.34-0.95)	0.94 (0.67-1.31)	1.19 (0.86-1.64)	1.00 (0.77-1.32)	0.75 (0.57-0.99)	0.63 (0.35-1.15)
Age ( <i>ref</i> = younger age)	1.02 (1.001-1.04)	1.03 (1.02-1.04)	1.03 (1.02-1.04)	1.02 (1.01-1.03)	1.03 (1.02-1.05)	1.02 (1.00-1.05)
Female sex ( <i>ref</i> = male)	1.10 (0.69-1.75)	1.02 (0.74-1.38)	0.86 (0.64-1.15)	1.09 (0.85-1.40)	0.93 (0.72-1.20)	0.75 (0.43-1.31)
Marital status ( <i>ref</i> = single)						
Committed relationship or married	1.03 (0.57-1.86)	0.73 (0.50-1.07)	0.86 (0.60-1.23)	0.98 (0.72-1.32)	1.06 (0.78-1.44)	0.73 (0.38-1.41)
Separated, divorced or widowed	0.61 (0.32-1.16)	0.91 (0.60-1.39)	0.59 (0.40-0.87)	0.87 (0.63-1.22)	0.92 (0.65-1.29)	1.37 (0.62-3.04)
Educational level ( <i>ref</i> < high school)						
High school	0.55 (0.15-2.08)	0.92 (0.48-1.78)	1.35 (0.72-2.52)	0.78 (0.43-1.40)	1.00 (0.55-1.81)	0.56 (0.12-2.51)
Some college	0.53 (0.14-2.02)	1.39 (0.71-2.72)	1.77 (0.94-3.35)	0.87 (0.48-1.59)	0.87 (0.47-1.60)	1.09 (0.23-5.27)
Graduate degree	0.46 (0.11-1.91)	1.48 (0.71-3.10)	1.47 (0.74-2.93)	0.95 (0.51-1.80)	0.79 (0.41-1.50)	0.61 (0.11-3.34)
Type of medical insurance ( <i>ref</i> = Medicaid, financial assistance or uninsured)						
Medicare	1.12 (0.54-2.31)	0.86 (0.54-1.37)	1.33 (0.85-2.10)	1.49 (1.01-2.19)	0.87 (0.59-1.30)	0.79 (0.35-1.75)
Commercial	1.53 (0.80-2.92)	1.51 (0.99-2.30)	1.71 (1.14-2.57)	1.98 (1.41-2.79)	1.37 (0.97-1.94)	1.58 (0.76-3.28)
Body mass index* ( <i>ref</i> ≤24.9 kg/m <sup>2</sup> )						
25-29.9 kg/m <sup>2</sup>	0.67 (0.33-1.35)	1.73 (1.07-2.81)	0.80 (0.50-1.28)	0.92 (0.62-1.38)	1.07 (0.71-1.61)	1.46 (0.58-3.65)
≥30 kg/m <sup>2</sup>	1.11 (0.54-2.31)	1.49 (0.97-2.29)	0.86 (0.55-1.32)	0.92 (0.64-1.32)	1.06 (0.73-1.53)	1.11 (0.49-2.49)
Total modified Charlson comorbidities ( <i>ref</i> = 0)						
1-2	0.69 (0.42-1.15)	0.72 (0.52-1.00)	0.73 (0.54-0.99)	1.00 (0.77-1.30)	1.13 (0.87-1.49)	1.77 (0.99-3.17)
≥3	0.60 (0.30-1.23)	0.82 (0.52-1.30)	0.69 (0.45-1.06)	0.92 (0.64-1.32)	1.39 (0.95-2.05)	3.59 (1.29-9.96)
Total diabetes complications <sup>†</sup> ( <i>ref</i> = 0)						
≥1	5.81 (2.67-12.63)	1.16 (0.83-1.63)	1.70 (1.22-2.38)	1.66 (1.26-2.19)	1.03 (0.78-1.36)	0.87 (0.48-1.58)
Level of social support ( <i>ref</i> ≥2)						
0-1	1.14 (0.60-2.15)	1.00 (0.71-1.47)	0.74 (0.53-1.04)	1.06 (0.80-1.41)	1.01 (0.74-1.37)	1.76 (0.80-3.89)
Median mental health composite score	1.04 (1.01-1.07)	1.01 (0.98-1.02)	1.01 (0.99-1.03)	1.01 (0.99-1.02)	0.99 (0.97-1.00)	0.97 (0.94-1.00)
Median physical health composite score	0.97 (0.94-1.00)	1.00 (0.98-1.03)	0.99 (0.97-1.01)	1.00 (0.99-1.02)	1.01 (0.99-1.02)	1.03 (0.99-1.07)
Measure of Treatment Intensity						
Attending physician is primary care provider	0.60 (0.30-1.21)	1.07 (0.67-1.70)	0.54 (0.30-0.98)	0.98 (0.66-1.46)	1.20 (0.82-1.77)	0.88 (0.38-2.02)
Total multidisciplinary visits <sup>§</sup>	4.26 (2.09-8.69)	1.46 (1.18-1.81)	1.45 (1.19-1.77)	1.19 (1.05-1.35)	1.09 (0.96-1.24)	0.96 (0.78-1.18)

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Total number of prescribed classes of diabetes medications ( <i>ref</i> = 0)						
1	5.67 (3.42-9.41)	2.46 (1.77-3.42)	2.27 (1.67-3.09)	1.80 (1.36-2.37)	1.81 (1.37-2.40)	1.29 (0.71-2.37)
$\geq 2$	5.47 (2.74-10.94)	2.15 (1.46-3.18)	3.26 (2.23-4.77)	1.76 (1.29-2.41)	1.96 (1.42-2.71)	1.54 (0.76-3.14)
Measure of Continuity of Care						
Proportion of total physician visits seen by primary care provider	3.54 (1.64-7.65)	1.78 (1.03-3.06)	1.60 (0.91-2.82)	1.18 (0.73-1.88)	1.44 (0.90-2.30)	0.38 (0.11-1.29)
Total missed physician appointments	1.12 (0.97-1.31)	1.01 (0.93-1.10)	0.99 (0.91-1.07)	0.92 (0.86-0.98)	1.07 (1.01-1.15)	0.97 (0.86-1.10)

A1C = glycated hemoglobin; LDL = low-density lipoprotein cholesterol; OR = odds ratio; CI = confidence interval; ref = reference;

kg = kilograms; m = meters

\* Body mass index = weight (kg) / height (m)<sup>2</sup>

† Diabetes complications include nephropathy, retinopathy, neuropathy and peripheral vascular disease

§ Multidisciplinary visits include visits to a diabetes nurse educator or pharmacist

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**Supplementary Table 2.** Factors Independently Associated with Diabetes Intermediate Outcomes.

	LDL<100mg/dL	BP<140/90mmHg	A1C<7.0% (<53 mmol/mol)	A1C>9.0% (>75 mmol/mol)
Black race ( <i>ref</i> = non-Hispanic white)	0.74 (0.55-0.99)	0.64 (0.49-0.84)	0.92 (0.70-1.20)	1.33 (0.93-1.90)
Age ( <i>ref</i> = younger age)	1.03 (1.01-1.04)	0.99 (0.98-1.00)	1.02 (1.01-1.03)	0.97 (0.95-0.98)
Female sex ( <i>ref</i> = male)	0.62 (0.48-0.81)	0.93 (0.72-1.21)	1.00 (0.79-1.27)	0.99 (0.71-1.40)
Marital status ( <i>ref</i> = single)				
Committed relationship or married	0.89 (0.65-1.22)	0.95 (0.69-1.30)	0.98 (0.73-1.32)	0.98 (0.65-1.47)
Separated, divorced or widowed	0.80 (0.56-1.13)	0.75 (0.54-1.04)	0.89 (0.65-1.23)	1.10 (0.70-1.73)
Educational level ( <i>ref</i> < high school)				
High school	0.98 (0.53-1.80)	0.75 (0.42-1.32)	0.83 (0.48-1.41)	1.17 (0.52-2.62)
Some college	0.94 (0.49-1.80)	0.70 (0.39-1.28)	0.93 (0.53-1.60)	1.34 (0.57-3.11)
Graduate degree	1.20 (0.59-2.24)	0.89 (0.47-1.71)	1.04 (0.58-1.86)	1.05 (0.42-2.63)
Type of medical insurance ( <i>ref</i> = Medicaid, financial assistance or uninsured)				
Medicare	1.03 (0.68-1.55)	1.02 (0.68-1.53)	0.96 (0.64-1.42)	1.39 (0.81-2.38)
Commercial	1.11 (0.77-1.59)	1.01 (0.71-1.44)	0.99 (0.70-1.41)	1.13 (0.71-1.79)
Body mass index* ( <i>ref</i> ≤24.9 kg/m <sup>2</sup> )				
25-29.9 kg/m <sup>2</sup>	0.61 (0.39-0.95)	0.88 (0.58-1.33)	1.11 (0.75-1.65)	0.74 (0.42-1.31)
≥30 kg/m <sup>2</sup>	0.65 (0.45-0.94)	0.78 (0.53-1.14)	0.94 (0.66-1.33)	0.87 (0.52-1.43)
Total modified Charlson comorbidities ( <i>ref</i> = 0)				
1-2	1.08 (0.83-1.42)	0.86 (0.65-1.12)	1.24 (0.94-1.63)	0.62 (0.42-0.91)
≥3	1.29 (0.88-1.89)	0.95 (0.66-1.37)	1.47 (1.03-2.12)	0.59 (0.35-0.99)
Total diabetes complications <sup>†</sup> ( <i>ref</i> = 0)				
≥1	1.10 (0.81-1.54)	0.82 (0.63-1.08)	0.67 (0.51-0.87)	1.46 (1.03-2.07)
Level of social support ( <i>ref</i> ≥2)				
0-1	0.91 (0.66-1.26)	0.97 (0.71-1.34)	1.29 (0.96-1.73)	0.97 (0.63-1.48)
Median mental health composite score	1.01 (1.00-1.03)	0.99 (0.98-1.01)	1.02 (1.001-1.03)	0.99 (0.97-1.01)
Median physical health composite score	1.00 (0.98-1.01)	1.01 (0.99-1.03)	0.98 (0.97-0.999)	1.00 (0.98-1.02)
Measure of Treatment Intensity				
Attending physician is primary care	1.01 (0.64-1.59)	0.96 (0.65-1.42)	1.18 (0.81-1.72)	0.60 (0.39-0.95)

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provider				
Total multidisciplinary visits <sup>§</sup>	1.11 (0.98-1.25)	1.00 (0.90-1.11)	0.68 (0.59-0.78)	1.37 (1.20-1.57)
Total number of prescribed classes of diabetes medications ( <i>ref</i> = 0)				
1	1.46 (1.04-2.05)	1.44 (1.08-1.93)	0.69 (0.52-0.92)	1.20 (0.73-1.96)
≥2	1.69 (1.18-2.41)	1.24 (0.90-1.72)	0.38 (0.27-0.52)	2.20 (1.34-3.61)
Measure of Continuity of Care				
Proportion of total physician visits seen by primary care provider	1.04 (0.59-1.83)	0.89 (0.55-1.46)	0.79 (0.49-1.28)	1.31 (0.69-2.51)
Total missed physician appointments	0.95 (0.88-1.01)	0.97 (0.91-1.03)	1.03 (0.97-1.11)	1.08 (1.00-1.17)

LDL = low-density lipoprotein cholesterol; BP = blood pressure; A1C = glycated hemoglobin; OR = odds ratio;

CI = confidence interval; ref = reference; kg = kilograms; m = meters

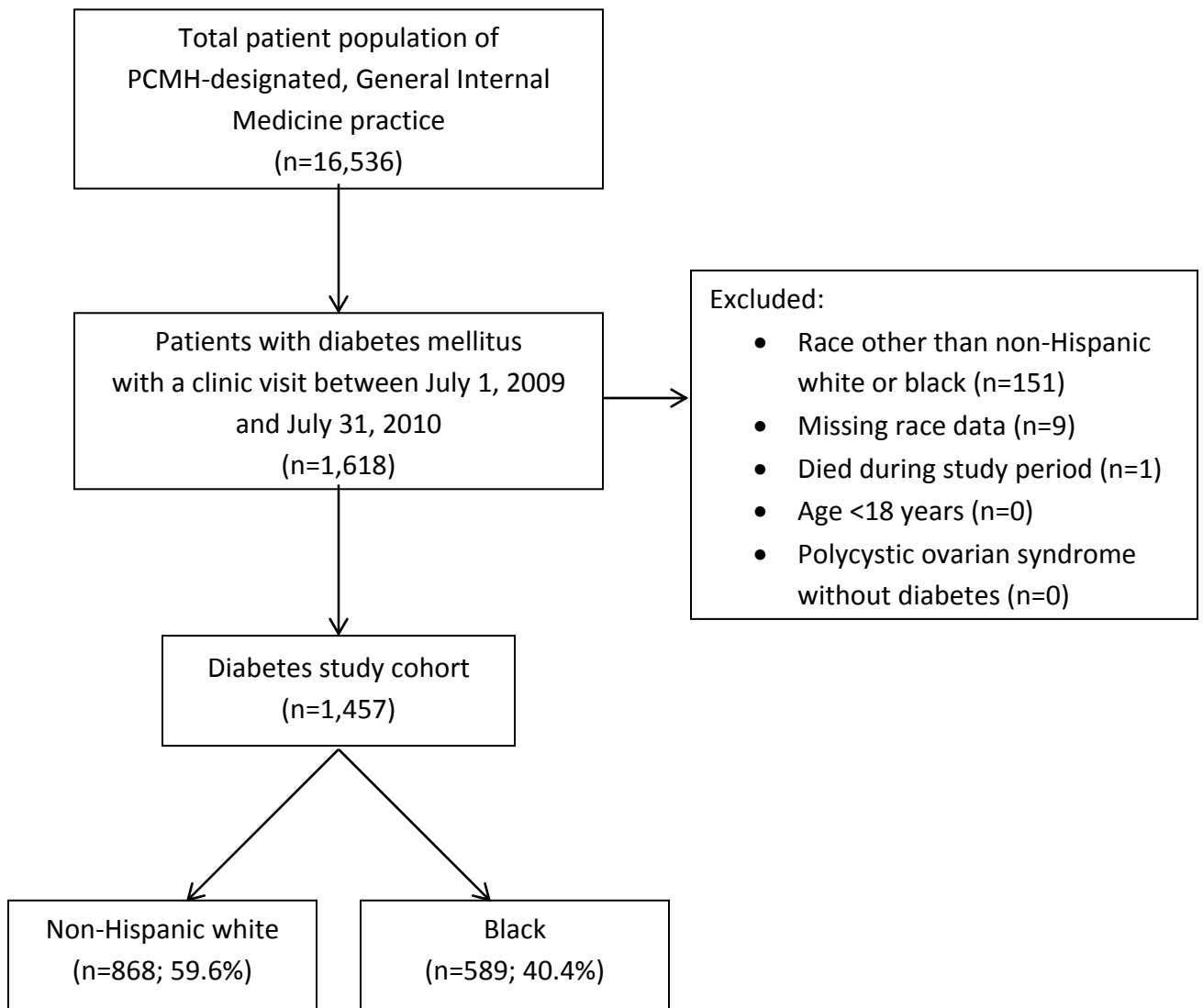
\* Body mass index = weight (kg) / height (m)<sup>2</sup>

† Diabetes complications include nephropathy, retinopathy, neuropathy and peripheral vascular disease

§ Multidisciplinary visits include visits to a diabetes nurse educator or pharmacist

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**Supplementary Figure 1.** Identification of the study cohort PCMH = Patient-Centered Medical Home.



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**Supplementary Figure 2.** Sensitivity Analysis of Patients with Attending Providers Adjusted odds ratios for black patients represent the likelihood of receiving a process of care or achieving an intermediate outcome of diabetes care, compared to non-Hispanic white patients. Black patients were less likely to have an LDL <100mg/dL and BP <140/90mmHg. Model covariates include: age; gender; marital status; education; insurance type; social support; mental and physical health composite scores; BMI; total number of diabetes complications; modified Charlson comorbidity index; treatment intensity (excluding provider type) and clinical care continuity. A1C = glycated hemoglobin; LDL = low-density lipoprotein cholesterol; BP = blood pressure; CI =confidence interval

