

Supplementary Online Content

Ravindranath R, Bernstein IA, Fernandez KS, Ludwig CA, Wang SY. Social determinants of health and perceived barriers to care on diabetic retinopathy screening. *JAMA Ophthalmol*. Published online November 16, 2023. doi:10.1001/jamaophthalmol.2023.5287

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Codes to Identify Individuals in All of Us

SNOMED Codes For T2D Conditions	721284006, 791000119109, 314903002, 712883005, 420756003, 771000119108, 741000119101, 731000119105, 721000119107, 711000119100, 711000119100119103, 1531000119102, 1481000119100, 422014003, 201000119106, 422099009, 421326000, 761000119102, 90791000119104, 428007007, 1521000119100, 421631007, 713703005, 368051000119109, 137931000119102, 190331003, 395204000, 120731000119103, 719216001, 237599002, 421750000, 421847006, 97331000119101, 769220000, 90781000119102, 138911000119106, 701000119103, 420436000, 190388001, 781000119106, 368581000119106, 1551000119108, 422166005, 1511000119107, 110181000119105, 713706002, 199230006, 609567009, 237627000, 1501000119109, 157141000119108, 420279001, 28331000119107, 422034002, 82541000119100, 44054006, 359642000, 81531005, 444110003, 314902007, 190389009, 313436004, 789567007, 10660471000119109, 110171000119107, 10661671000119102, 140391000119101
OMOP Code for T2D Drugs	21600712 and its descendants

eTable 2. Survey Questions from The Basics, Overall Health, Healthcare Access and Utilization, and Social Determinants of Health

Survey	Short Description	OMOP Concept ID	Question	Responses	Reference category
Overall Health	Physical Health	1585723	In general, how would you rate your physical health?	Poor, Fair, Good, Very Good, Excellent, and Skip	“Good” chosen as reference for these questions, as it most closely represents a “median” or perhaps “average” level of health
	Mental Health	1585729	In general, how would you rate your mental health, including your mood and your ability to think?	Poor, Fair, Good, Very Good, Excellent, and Skip	
	General Health	1585711	In general, would you say your health is:	Poor, Fair, Good, Very Good, Excellent, and Skip	
	Quality of Life	1585717	In general, would you say your quality of life is:	Poor, Fair, Good, Very Good, Excellent, and Skip	
Social Determinants of Health	Food Insecurity	40192517	Within the past 12 months, were you worried whether your food would run out before you got money to buy more?	Never True, Sometimes, True, Often True, and Skip	“Never True” as reference for consistency with housing insecurity “No” chosen as reference for yes/no questions
	Non-English Language	40192526	Do you speak a language other than English at home?	No, Yes, Unknown	
The Basics	Housing Insecurity	1585886	In the past 6 months, have you been worried or concerned about NOT having a place to live?	No, Yes, Skip	“No” chosen as reference for yes/no questions
Healthcare Access & Utilization	Rural Living Area	43530268	You live in a rural area where distance to the health care provider is too far?	No, Yes, Unknown	“No” chosen as reference for yes/no questions
	Provider Concordance Healthcare Delay	43529899	The following questions are about your experiences with health care providers in the past year. Some people think it is important for their providers to understand or share their race or ethnicity or gender or religion or beliefs or native language. How often have you either delayed or not gone to see health care providers because they were different from you in any of these ways?	None of the Time, Some of the Time, Most of the Time, Always, Don’t Know, Skip	“None of the Time”
	Health Literacy	43530438	How often did your health care providers tell or give you information about your health and health care that was easy to understand? Would you say...	None of the Time, Some of the Time, Most of the Time, Always, Don’t Know, Skip	“None of the Time”
	Provider Concordance Healthcare Importance	43529901	The following questions are about your experiences with health care providers in the past year. Some people think it is important for their providers to understand or share their race or ethnicity or gender or religion or beliefs or native language. How important is it to you that your health care	Not Important, Slightly Important, Somewhat Important, Very Important, Don’t Know, and Skip	“Not Important”

providers understand or are similar to you in any of these
ways? Would you say...

eTable 3. Sociodemographic predictors for visiting an eye care provider among All Of Us Participants with Type 2 Diabetes using alternate reference levels

		Model 1 OR (95% CI)	Model 2 AOR (95% CI)
Employment	Employed for wages	Ref	Ref
	Self-Employed	0.88 (0.73, 1.07)	0.85 (0.70, 1.04)
	Out of work/ Unable to Work	0.78 (0.70, 0.88)	1.07 (0.94, 1.21)
	Retired	1.01 (0.92, 1.11)	1.02 (0.90, 1.15)
	Other	0.82 (0.66, 1.02)	1.13 (0.90, 1.43)
	Unknown	0.54 (0.39, 0.76)	0.80 (0.56, 1.16)
Income	Less than 25K	0.47 (0.39, 0.55)	0.65 (0.53, 0.79)
	25K – 49.9K	0.57 (0.48, 0.68)	0.70 (0.58, 0.84)
	50K – 74.9K	0.67 (0.56, 0.80)	0.78 (0.65, 0.93)
	75K – 99.9K	0.83 (0.69, 1.00)	0.91 (0.75, 1.11)
	100K – 149.9K	0.93 (0.77, 1.12)	0.98 (0.81, 1.18)
	150K+	Ref	Ref
	Unknown	0.54 (0.45, 0.64)	0.70 (0.57, 0.86)
Insurance Coverage	No	0.40 (0.32, 0.51)	0.52 (0.41, 0.66)
	Yes	Ref	Ref
	Unknown	0.54 (0.38, 0.77)	0.66 (0.46, 0.96)

Model 1 was unadjusted and thus odds ratios (OR) are reported; Model 2 adjusted for age, race/ethnicity, gender, education, sexual orientation, employment, relationship status, and income and thus adjusted odds ratios (AOR) are reported

eTable 4. Self-reported health and social predictors for visiting an eye care provider among All Of Us participants with Type 2 Diabetes using alternate reference levels

		Model 1 OR (95% CI)	Model 2 AOR (95% CI)
Mental Health	Poor	0.80 (0.62, 1.03)	1.09 (0.84, 1.43)
	Fair	0.70 (0.61, 0.80)	0.88 (0.76, 1.02)
	Good	0.89 (0.79, 0.99)	1.05 (0.93, 1.18)
	Very Good	0.97 (0.86, 1.08)	1.01 (0.91, 1.13)
	Excellent	Ref	Ref
	Skip	1.25 (0.77, 2.11)	1.56 (0.95, 2.66)
Physical Health	Poor	0.87 (0.64, 1.17)	0.90 (0.77, 1.06)
	Fair	1.07 (0.81, 1.40)	1.01 (0.92, 1.12)
	Good	1.14 (0.86, 1.49)	1.00 (0.89, 1.12)
	Very Good	1.28 (0.96, 1.69)	0.77 (0.58, 1.02)
	Excellent	Ref	Ref
	Skip	1.15 (0.71, 1.90)	1.15 (0.76, 1.79)
General Health	Poor	0.92 (0.68, 1.23)	1.28 (0.94, 1.73)
	Fair	1.04 (0.80, 1.35)	1.33 (1.01, 1.74)
	Good	1.17 (0.90, 1.51)	1.36 (1.04, 1.77)
	Very Good	1.31 (1.00, 1.70)	1.35 (1.02, 1.77)
	Excellent	Ref	Ref
	Skip	1.01 (0.60, 1.74)	1.29 (0.75, 2.26)
Quality of Life	Poor	0.58 (0.44, 0.75)	0.83 (0.63, 1.10)
	Fair	0.74 (0.64, 0.87)	1.02 (0.87, 1.21)
	Good	0.83 (0.72, 0.94)	1.05 (0.91, 1.20)
	Very Good	0.99 (0.86, 1.13)	1.08 (0.94, 1.23)
	Excellent	Ref	Ref
	Skip	0.65 (0.45, 0.93)	0.86 (0.60, 1.25)

Model 1 was unadjusted and thus odds ratios (OR) are reported; Model 2 adjusted for age, race/ethnicity, gender, education, sexual orientation, employment, relationship status, and income and thus adjusted odds ratios (AOR) are reported