

The MURDOCK Study Community Registry and Biorepository is a 12,526-participant community-based longitudinal cohort recruited from a 20-Zip Code region in the Southeastern United States (U.S.) that is centered in the city of Kannapolis, NC and encompasses Cabarrus County, NC.

Creation of the cohort was funded by a gift to Duke University from the David H. Murdock Institute for Business and Culture, with operational support from Duke's Clinical and Translational Science Award (CTSA) grant (UL1TR002553) and the Duke Clinical and Translational Science Institute (CTSI).

Managed by **UME** Clinical & Translational Science Institute

Consenting participants complete a baseline health questionnaire at enrollment, as well as a brief physical exam and collection of blood and urine. Consent includes permission to access to information from medical records, storage of collected samples in the biorepository, access to collected data and biospecimens for future approved research studies and contact regarding new research study opportunities.

Data have been organized into "storefronts" that summarize characteristics of a population of research interest as well as available data and samples for that population. The following sections summarize the sources of data in the MURDOCK Study database, as well as important descriptions and definitions to help understand the data presented in the "storefronts".

1 Participant self-reported data at baseline. The baseline questionnaire collects contact information, current residential street address, and primary physician; alternate contact information; date and place of birth; demographics; current or past diagnosis of 34 medical conditions; menopausal status in women; medications, vitamins and supplements; dietary and physical activity assessment; hours of sleep per night; tobacco and alcohol use; second-hand smoke exposure; and selected PROMIS® participant-reported outcomes domains. Socioeconomic data collected at baseline included marital status, highest level of education of participant and participant's mother and father, employ ment status, mother's and father's occupations, housing (type, how paid for, number of adults and children in the household) and total household income. In addition, a brief physical exam (vital signs, height, weight, and waist circumf erence) was conducted at enrollment.

Medical conditions: "Do you have, or have you ever had, any of the following [medical conditions]?" (yes, no, don't know). Counts are unique participants reporting yes to specific condition. Medications: "Please list any pharmaceutical and/or natural medications (including vitamins) that you are currently taking." Data are captured in free-text format as written by the participant and coded using RxNorm. Summary metrics are based on everything reported. Top 5 reported medications are limited to reported prescriptions.

2 Biorepository samples. Blood was collected at baseline and processed into the following specific samples: whole blood in EDTA for DNA extraction, whole blood in PAXgene for RNA extraction, plasma, serum and buffy coat in cry ovials. Urine was collected and aliquoted in cry ovials. Serial sample collection was not done systematically for MURDOCK enrollees; however, some nested sub cohorts and other studies enrolling MURDOCK registry participants include sample collection at follow up time points. All samples are stored at -80°C in a central biorepository current managed by Fisher BioServices, a division of Thermo Fisher Scientific, under a contractual agreement with Duke University.

Samples in inventory: Data are summarized by sample type as well as specific container and size. Participant counts are unique individuals with one ore more aliquots. Aliquot counts are all unique samples for a given type and container, size. Freezers is a calculation of approximate storage requirements based on sample type/size, box size, and number of boxes that can be stored per freezer.

3 Participant self-reported changes in health via annual follow up. Participants are asked to complete a follow-up form once a year around the time of their original enrollment date. Participants may update contact information, primary care physician/practice and alternate contact. PROMIS domains are repeated at each annual time point in order to capture changes in participant-reported outcomes over time. The form collects new incidence/diagnosis of the same 34 medical conditions surveyed at baseline. Hospitalizations during the past year are collected along with reason, as well as specific medical procedures. Participants may update their medication list to reflect current medications, vitamins and supplements being taken at the time of follow up form completion.

Vital status: Death reported by family member or alternate contact is confirmed by obituary as the primary source. Cause of death is not captured. Follow-up metrics: Follow-up is defined as complete if participant fills out the survey online or by mail or phone. Completeness is measured as surveys completed relative to y ears eligible to complete follow-up. Medical conditions: "Please indicate if y ou have received a new diagnosis of any of the following medical conditions in the past year (yes, no, don't know)". Counts and percentages are unique participants reporting yes to specific condition in follow-up for participants that did NOT report yes at baseline. Procedures: "Please indicate if y ou have any of the following medical procedures in the past year". Counts are unique participants: Participants are asked to report if they have been hospitalized within the last year, for each hospitalization they are asked to list reason(s) for hospitalization, admission date and hospital name. Reasons for hospitalization. Medications: (see note above for medications reported at baseline). The denominator for data based on last follow-up are participants with at least one follow-up survey complete.

4 Electronic health record (EHR) data from regional healthcare providers. Duke has partnered with regional healthcare providers to integrate data from EHR systems for consented MURDOCK Study participants. Participants are identified in EHR systems with robust matching algorithms using common identifiers from the MURDOCK and EHR databases. Data are transferred under a data use agreement (DUA) with the specific provider organization which specifies the scope of data and frequency of transfers. Data availability vary by participant and depend on whether or not a participant has had one or more encounters with the healthcare provider system during the time period included in the dataset.

Available EHR datasets: Data are summarized by healthcare provider organizations. Counts are unique participants with one or more ICD codes in the EHR dataset. Available EHR domains: Data area summarized by domain in the EHR dataset. Counts are unique participants with one of more records (rows of data) for the specified domain. Insights from available EHR data: Specific EHR data related to the population of research interest is presented with granularity when possible.

5 Additional data collection from studies with MURDOCK participants. MURDOCK Study participants may be recruited to enroll in additional research study opportunities by Duke researchers or other collaborators. Data sharing is a condition of collaboration with with the MURDOCK Study; therefore, data collected from MURDOCK Study participants and/or generated from biospecimens as part of additional research studies is returned for integration with all other MURDOCK registry data.

"Storefronts" for nested sub-cohorts summarize surveys, assessments and/or other data collected specifically as part of enrollment and participation in the study. **Samples in inventory**: Samples are summarized if collected (see note above for samples collected at baseline). **Participation in other studies**: Counts are participants from the population of research interest enrolled in the specified study listed. *Brief descriptions of relevant studies are listed along with a summary of study procedures and/or data collected*.



Page 2

MURDOCK Study participants with asthma, N=2,100

Participant self-reported characteristics at MURDOCK Study enrollment (baseline, February 2009 – March 2018)

Dem ographics at baseline				
Age	Baseline			
Median (25 th , 75 th)	53 (41, 63)			
Min, Max	<18, 90+			
Sex				
Female	1,526 (73%)			
Male	574 (27%)			
Race	- (,			
American Indian & Alaska Native	4 (<1%)			
Asian	13 (<1%)			
Black or African American	373 (18%)			
Native Haw aiian & Other Pacific Islander	2 (<1%)			
White/Caucasian	1,527 (73%)			
Other	95 (5%)			
Multiple	68 (3%)			
Don't know /Not sure/Not answ ered	18 (<1%)			
Ethnicity	10 ((170)			
Hispanic or Latino	150 (7%)			
Non-Hispanic or Latino	1,908 (91%)			
Don't know /Not sure/Not answ ered	42 (2%)			
	42 (270)			
Smoking history at baseline Smoked	000 (170()			
	996 (47%)			
Never smoked	1,081 (51%)			
Don't know, no response	23 (1%)			
Current or prior medical conditions reported 26 of 34 solicited medical conditions, listed by d				
Asthma	1,608 (77%)			
Asthma High blood pressure	1,608 (77%) 944 (45%)			
High blood pressure	944 (45%)			
High blood pressure High cholesterol	944 (45%) 930 (44%)			
High blood pressure High cholesterol Obesity	944 (45%) 930 (44%) 816 (39%)			
High blood pressure High cholesterol Obesity Depression	944 (45%) 930 (44%) 816 (39%) 801 (38%)			
High blood pressure High cholesterol Obesity Depression Osteoarthritis	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%)			
High blood pressure High cholesterol Obesity Depression Osteoarthritis Diabetes	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%)			
High blood pressure High cholesterol Obesity Depression Osteoarthritis Diabetes Thyroid disease	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%)			
High blood pressure High cholesterol Obesity Depression Osteoarthritis Diabetes Thyroid disease Emphysema or "COPD"	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/Osteopenia	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%)			
High blood pressure High cholesterol Obesity Depression Osteoarthritis Diabetes Thyroid disease Emphysema or "COPD" Osteoporosis/Osteopenia Rheumatoid arthritis	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanoma	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune disease	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosis	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 153 (7%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or angina	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 153 (7%) 132 (6%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery disease	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 158 (8%) 153 (7%) 132 (6%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillation	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 333 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 153 (7%) 132 (6%) 130 (6%) 116 (6%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGout	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 233 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 153 (7%) 132 (6%) 130 (6%) 116 (6%) 113 (5%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGoutStroke	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 233 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 153 (7%) 132 (6%) 130 (6%) 116 (6%) 113 (5%) 89 (4%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGoutStrokeCongestive heart failure	944 (45%) 930 (44%) 816 (39%) 801 (38%) 544 (26%) 433 (21%) 233 (16%) 297 (14%) 260 (12%) 237 (11%) 207 (10%) 169 (8%) 158 (8%) 158 (8%) 153 (7%) 132 (6%) 113 (6%) 116 (6%) 89 (4%) 86 (4%)			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGoutStrokeCongestive heart failureKidney disease	$\begin{array}{c} 944 (45\%) \\ 930 (44\%) \\ 816 (39\%) \\ 801 (38\%) \\ 544 (26\%) \\ 433 (21\%) \\ 333 (16\%) \\ 297 (14\%) \\ 260 (12\%) \\ 237 (11\%) \\ 207 (10\%) \\ 169 (8\%) \\ 158 (8\%) \\ 158 (8\%) \\ 153 (7\%) \\ 132 (6\%) \\ 113 (5\%) \\ 89 (4\%) \\ 86 (4\%) \\ 74 (4\%) \end{array}$			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGoutStrokeCongestive heart failureKidney diseaseOther type of cancer	$\begin{array}{c} 944 (45\%) \\ 930 (44\%) \\ 816 (39\%) \\ 801 (38\%) \\ 544 (26\%) \\ 433 (21\%) \\ 333 (16\%) \\ 297 (14\%) \\ 260 (12\%) \\ 237 (11\%) \\ 207 (10\%) \\ 169 (8\%) \\ 158 (8\%) \\ 153 (7\%) \\ 132 (6\%) \\ 130 (6\%) \\ 113 (5\%) \\ 89 (4\%) \\ 86 (4\%) \\ 74 (4\%) \\ 71 (3\%) \end{array}$			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGoutStrokeCongestive heart failureKidney diseaseOther type of cancerMelanoma	$\begin{array}{c} 944 (45\%) \\ 930 (44\%) \\ 816 (39\%) \\ 801 (38\%) \\ 544 (26\%) \\ 433 (21\%) \\ 333 (16\%) \\ 297 (14\%) \\ 260 (12\%) \\ 237 (11\%) \\ 207 (10\%) \\ 169 (8\%) \\ 158 (8\%) \\ 158 (8\%) \\ 153 (7\%) \\ 132 (6\%) \\ 130 (6\%) \\ 113 (5\%) \\ 89 (4\%) \\ 86 (4\%) \\ 74 (4\%) \\ 71 (3\%) \\ 62 (3\%) \end{array}$			
High blood pressureHigh cholesterolObesityDepressionOsteoarthritisDiabetesThyroid diseaseEmphysema or "COPD"Osteoporosis/OsteopeniaRheumatoid arthritisSkin cancer, not melanomaOther mental illnessOther autoimmune diseaseMultiple sclerosisHeart attack or anginaCoronary artery diseaseAtrial fibrillationGoutStrokeCongestive heart failureKidney diseaseOther type of cancer	$\begin{array}{c} 944(45\%)\\ 930(44\%)\\ 816(39\%)\\ 801(38\%)\\ 544(26\%)\\ 433(21\%)\\ 333(16\%)\\ 297(14\%)\\ 260(12\%)\\ 237(11\%)\\ 207(10\%)\\ 169(8\%)\\ 158(8\%)\\ 158(8\%)\\ 153(7\%)\\ 132(6\%)\\ 130(6\%)\\ 113(5\%)\\ 89(4\%)\\ 86(4\%)\\ 74(4\%)\\ 71(3\%)\end{array}$			

Education at	haseline	., 2000		,			
				100 (00()			
_	h school graduate			189 (9%)			
-	raduate, equivalent or associates degre	0	455 (22%)				
Bachelor's de		c		835 (40%)			
	gher professional de	aree		393 (19%)			
Income at ba	•	giee		227 (11%)			
Under \$10,00				107 (0%)			
\$10,000-29,9				197 (9%) 429 (20%)			
	\$30,000-29,999 \$30,000-49,999			367 (17%)			
\$50,000-69,9				283 (13%)			
\$70,000-89,9			207 (10%)				
\$90,000 or ma				363 (17%)			
Don't know, n				254 (12%)			
	ndex (BMI) at base	ine					
<18.5 (underv				23 (1%)			
18.5 - 24.9 (n	ormal w eight)		427 (20%)				
25 - 29.9 (ove	erweight)			642 (31%)			
30+ (obese)			996 (48%)				
Exercise at b	oaseline			,			
Little to no ph	ysical activity		929 (44%)				
			382 (18%)				
Moderate activity 3x per w eek			515 (25%)				
Heavy activity 3x per w eek			167 (8%)				
Heavy activity	/ 5x per w eek		92 (4%)				
Medications	, vitamins, supplem	ents at base	line				
Median (25th,	edian (25th, 75th) reported			7 (3, 11)			
10+ reported,	n (%)		689 (33%)				
Top 5 report	ed medications						
Albuterol				437 (21%)			
Fluticasone	casone 344 (17			344 (17%)			
Omeprazole				307 (15%)			
Lisinopril			288 (14%)				
Levothyroxine			286 (14%				
Sam ples cur	rently in inventory	(collected at	baseline	time point)			
Sam ple	Container, Size	Participant	sAliquot	s Freezers			
Plasma	Cryovial, 0.5 mL	1,931	23,672	0.417			
Serum	Cryovial, 0.5 mL	1,943	17,219	0.304			
	Cryovial, 5.0 mL	1,682	1,682	0.059			
Whole blood	PAXgene RNA	1,853	4,238	0.247			
	Vacutainer, 2.0 mL	1,010	1,612	0.047			
Buffy coat	Cryovial, 2.0 mL	0	0	0.000			
Urine	Cryovial, 0.5 mL	6	6	0.000			
	Cryovial, 10.0 mL	1,898	1,898	0.151			
Total			50,327	1.225			



20230815

Page 3

292 (14%)

286 (14%)

MURDOCK Study participants with asthma, N=2,100

Fluticasone

Atorvastatin

Participant status and data from MURDOCK Study follow-up surveys and electronic health records

Participant vital status 1,840 (88%) Alive 1,840 (88%) Deceased 260 (12%) Current Age Current Median (25 ^m , 75 ^m) 62 (51,73) Min, Max 25,90+ Follow-up metrics, study participation 143 (120,159) Median (25 ^m , 75 ^m) years since enrollment 143 (120,159) Median (25 ^m , 75 ^m) years since enrollment 12 (10, 13) Median (25 ^m , 75 ^m) years since enrollment 12 (10, 13) Median (25 ^m , 75 ^m) years since enrollment 143 (120,159) Median (25 ^m , 75 ^m) years since enrollment 143 (120,159) Median (25 ^m , 75 ^m) years since enrollment 143 (120,159) Atleast one (1) follow -up survey complete, n (%) 11,818 (87%) Last completed follow -up s18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICD-cde) Any source Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Natiuble EHR dat							
Deceased $260 (12\%)$ Current AgeCurrentMedian ($25^{m}, 75^{m}$) $62 (51, 73)$ Min, Max $25, 90+$ Follow-up metrics, study participationMedian ($25^{m}, 75^{m}$) months since enrollment $143 (120, 159)$ Median ($25^{m}, 75^{m}$) years since enrollment $142 (10, 13)$ Median ($25^{m}, 75^{m}$) years since enrollment $143 (120, 159)$ Median ($25^{m}, 75^{m}$) years years opelete $6 (2, 10)$ Overall completeness of follow up, n/N(%) $11,881/19,619 (61\%)$ At least one (1) follow -up survey complete, n (%) $11,881/19,619 (61\%)$ At least one (1) follow -up s 18 months $946 (45\%)$ Enrolled in one or more other studies $994 (47\%)$ Available EHR datasets by source (any ICDcote)Any source $1,069 (51\%)$ Novant Health $767 (37\%)$ Cabarrus Row an Community Health Centers $110 (5\%)$ Bethesda Health Center $13 (1\%)$ Community Free Clinic $15 (1\%)$ Atrium (Carolinas Healthcare) $Va3 (35\%)$ Mediations $326 (39\%)$ Allergies $479 (23\%)$ Immunizations $372 (18\%)$ Problems $596 (28\%)$ Problems <td></td> <td>t vital status</td> <td></td> <td></td> <td></td> <td></td> <td></td>		t vital status					
Current Age Current Median (25 th , 75 th) 62 (51, 73) Min, Max 25, 90+ Follow-up metrics, study participation 143 (120, 159) Median (25 th , 75 th) years since enrollment 143 (120, 159) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 148 (87%) 100% completeness of follow -up scomplete 6 (2, 10) Overall completeness of follow -up scomplete 6 (2, 10) Overall completeness of follow -up scomplete 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 994 (47%) Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 826 (41%) Diagnoses 1,069 (51%) Labs 869 (41%) Nitals 372 (18%) Procedures 472 (22%) Hobginalizations 35						1,84	40 (88%)
Median (25 th , 75 th) 62 (51, 73) Min, Max 25, 90+ Follow-up metrics, study participation 143 (120, 159) Median (25 th , 75 th) years since enrollment 143 (120, 159) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) yearly follow-up scomplete 6 (2, 10) Overall completeness of follow-up survey complete, n (%) 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICDcote) Any source Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data dom ains 208 Diagnoses 1,069 (51%) Labs 743 (35%) Medications 826 (39%)	Deceased					26	60 (12%)
Min, Max $25, 90+$ Follow-up metrics, study participationMedian (25 ^m , 75 ^m) months since enrollment143 (120, 159)Median (25 ^m , 75 ^m) years since enrollment12 (10, 13)Median (25 ^m , 75 ^m) years y follow-up complete 6 (2, 10)Overall completeness of follow-up, n/N(%)11,881/19,619 (61%)At least one (1) follow-up survey complete, n (%)1,818 (87%)100% completion (n, %)576 (27%)Last completed follow-up s18 months946 (45%)Enrolled in one or more other studies994 (47%)Available EHR datasets by source (any ICDcode)Any source1,069 (51%)Novant Health767 (37%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains826 (39%)Labs869 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations354 (17%)Problems596 (28%)No (10, 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25 ^m , 75 ^m)1929.5 (310, 3263.5)Min, Max0, 1052Select pheodesgroupSelect pheodes170Solth Streen first and last encounter:Median (25 ^m , 75 ^m)1929.5 (310, 3263.5)Min, Max0, 1052Select pheodesgroup	Current Ag	ge					Current
Follow -up metrics, study participationMedian (25^{in} , 75^{in}) months since enrollment143 (120, 159)Median (25^{in} , 75^{in}) years since enrollment12 (10, 13)Median (25^{in} , 75^{in}) years since enrollment12 (10, 13)Median (25^{in} , 75^{in}) years since enrollment12 (10, 13)Median (25^{in} , 75^{in}) yearly follow -up scomplete6 (2, 10)Overall completeness of follow -up source complete, n (%)11,881/19,619 (61%)At least one (1) follow -up ≤ 18 months946 (45%)Incolled in one or more other studies994 (47%)Available EHR datasets by source (any ICDcode)Any source1,069 (51%)Novant Health767 (37%)Cabarrus Row an Community Health Centers110 (5%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains826 (39%)Dagnoses1,069 (51%)Labs869 (41%)Vitals743 (35%)Medications372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data192.5 (310, 3263.5)Nin, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232<	Median (25	th , 75 th)				62	2 (51, 73)
Median (25 th , 75 th) months since enrollment 143 (120, 159) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) yearly follow -up scomplete 6 (2, 10) Overall completeness of follow -up scomplete, n (%) 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICD-cote) Any source Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Canter 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 826 (39%) Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications	Min, Max						25, 90+
Median (25 th , 75 th) months since enrollment 143 (120, 159) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) yearly follow -up scomplete 6 (2, 10) Overall completeness of follow -up scomplete, n (%) 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICD-cote) Any source Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Canter 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 826 (39%) Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications	Follow-up	metrics, study participa	tion				
Median (25 th , 75 th) years since enrollment 12 (10, 13) Median (25 th , 75 th) yearly follow -ups complete 6 (2, 10) Overall completeness of follow -up, n/N(%) 11,881/19,619 (61%) At least one (1) follow -up survey complete, n(%) 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICD code) In (69 (51%)) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 1069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Medications 221 (18%) Insights from available EHR data 1929					14	43 (1	20, 159)
Median (25 th , 75 th) yearly follow -ups complete 6 (2, 10) Overall completeness of follow -up, n/N(%) 11,881/19,619 (61%) At least one (1) follow -up survey complete, n(%) 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICD code) Any source Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Health Alliance 383 (18%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 0 Diagnoses 1,069 (51%) Labs 889 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Procedures 472 (22%) Hospitalizations 354 (17%) Lasy Ex	Median (25	th, 75th) years since enrolli	ment				
Overall completeness of follow -up, n/N(%) 11,881/19,619 (61%) At least one (1) follow -up survey complete, n (%) 1,818 (87%) 100% completion (n, %) 576 (27%) Last completed follow -up ≤ 18 months 946 (45%) Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICD code) Any source Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Health Alliance 383 (18%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data dom ains 10,69 (51%) Labs 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 0, 10552 Select phecodes, mapped from diagnosis codes Phecode				e			
At least one (1) follow -up survey complete, n (%)1,818 (87%)100% completion (n, %)576 (27%)Last completed follow -up \leq 18 months946 (45%)Enrolled in one or more other studies994 (47%)Available EHR datasets by source (any ICD code)Any source1,069 (51%)Novant Health767 (37%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data dom ains889 (41%)Diagnoses1,069 (51%)Labs889 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic21150.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory11250.11GECLabsParticipantsCode days between first and last encounter:Number of days between first and last encounter:Solect phecodes, mapped from diagnosis codes <t< td=""><td></td><td></td><td>•</td><td></td><td>11.881/1</td><td>9.61</td><td></td></t<>			•		11.881/1	9.61	
100% completion (n, %)576 (27%)Last completed follow -up < 18 months		• • •	. ,		,		. ,
Last completed follow -up ≤ 18 months946 (45%)Enrolled in one or more other studies994 (47%)Available EHR datasets by source (any ICD code)Any source1,069 (51%)Novant Health767 (37%)Cabarrus Health Alliance383 (18%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains0Diagnoses1,069 (51%)Labs869 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemia401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic114512.8Coughcert phecodes4,754516CodeCodea,754512.8CoughFrestLabsComplemensive metabolic panel3,764516CBC and differential3,069455TS			p.o.o, ((,,,,)			
Enrolled in one or more other studies 994 (47%) Available EHR datasets by source (any ICDcode) Indep (51%) Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 0 Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 1929.5 (310, 3263.5) Nin, Max 0, 1052 Select phecodes, mapped from diagnosis codes 14 Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 250.2 Type 2 diabetes endocrine/metabolic <		· · · /	e				· · ·
Available EHR datasets by source (any ICD code)Any source1,069 (51%)Novant Health767 (37%)Cabarrus Health Alliance383 (18%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains0Diagnoses1,069 (51%)Labs869 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data2022 (last encounter)Number of days between first and last encounter:1929.5 (310, 3263.5)Nin, Max0, 10552Select phecodes, mapped from diagnosis codes71/2 (22%)PhecodeDescriptionGroup401.1Essential hypertensioncirculatory system232.272.1Hyperlipidemiaendocrine/metabolic401.1Essential hypertensioncirculatory system230.2Type 2 diabetesendocrine/metabolic230.11GERDdigestive107278.1Obesityendocrine/metabolic110Select Iaboratory tests516388Hemoglobin A1C1,813349Lipid panel1,457349GBC1,688331							` '
Any source 1,069 (51%) Novant Health 767 (37%) Cabarrus Health Alliance 383 (18%) Cabarrus Row an Community Health Centers 110 (5%) Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 0 Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 1929.5 (310, 3263.5) Min, Max 0, 10552 Select phecodes, mapped from diagnosis codes 112 Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 1100 Select				_		30	94 (47 70)
Novant Health767 (37%)Cabarrus Health Alliance383 (18%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains0Diagnoses1,069 (51%)Labs869 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data2022 (last encounter)Number of days between first and last encounter:1929.5 (310, 3263.5)Nin, Max0, 10552Select phe-codes, mapped from diagnosis codes114512.8Coughrespiratory112.8Coughrespiratory272.1Hyperlipidemiaendocrine/metabolic272.2.1Hyperlipidemiaendocrine/metabolic272.1Hyperlipidemiaendocrine/metabolic272.1Hyperlipidemiaendocrine/metabolic273.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocri			(any ICI	Dcc	ode)	4.04	00 (540()
Cabarrus Health Alliance383 (18%)Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains0Diagnoses1,069 (51%)Labs869 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data2022 (last encounter)Number of days between first and last encounter:1929.5 (310, 3263.5)Nin, Max0, 10552Select phecodes, mapped from diagnosis codes740.11PhecodeDescriptionGroupPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select la boratory testsTestLabsComprehensive metabolic panel3,754Comprehensive metabolic panel3,754Comprehensive metabolic panel1,4571pid panel1,457 <td>,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	,						
Cabarrus Row an Community Health Centers110 (5%)Bethesda Health Center13 (1%)Community Free Clinic15 (1%)Atrium (Carolinas Healthcare)0Available EHR data domains0Diagnoses1,069 (51%)Labs869 (41%)Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data354 (17%)Date range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Number of days between first and last encounter:Number of days between first and last encounter:Median (25%, 75%)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic21150.2Type 2 diabetesendocrine/metabolic212.8Coughrespiratory112530.11GERDdigestive100Select laboratory testsTestLabsCand differential3,06975H						76	67 (37%)
Bethesda Health Center 13 (1%) Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data domains 0 Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data Date range: July 1993 (first encounter), Aug. 2022 (last encounter) Number of days between first and last encounter: Medication (25 th , 75 th) Number of days between first and last encounter: Medication (25 th , 75 th) Number of days between first and last encounter: Medication (25 th , 75 th) Number of days between first and last encounter: Medication (25 th , 75 th) Number of days between first and last encounter: Medication (25 th , 75 th) Media (25 th , 75 th) 1929.5 (310, 3263.5) Nin, Max 0, 10552 Select phecodes, mapped from diagnosis codes						38	33 (18%)
Community Free Clinic 15 (1%) Atrium (Carolinas Healthcare) 0 Available EHR data dom ains 0 Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 222 (last encounter) Number of days between first and last encounter: Number of days between first and last encounter: Number of days between first and last encounter: 0, 01052 Select phecodes, mapped from diagnosis codes Phecode Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 114 512.8 Cough respiratory 112 130.11			Centers				110 (5%)
Atrium (Carolinas Healthcare) 0 Available EHR data dom ains 0 Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 222 (last encounter) Number of days between first and last encounter: Number of days between first and last encounter: Number of days between first and last encounter: 0, 01552 Select phecodes, mapped from diagnosis codes Phecode Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 114 512.8 Cough respiratory<							13 (1%)
Available EHR data domains Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data Date range: July 1993 (first encounter), Aug. 2022 (last encounter) Number of days between first and last encounter: 0, 10552 Select phecodes, mapped from diagnosi scodes Phecode Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 114 512.8 Cough respiratory 112 530.11 GERD digestive 107 278.1 Obesity endocrine/metabolic 100 Select laboratory tests Test </td <td>Community</td> <td>Free Clinic</td> <td></td> <td></td> <td></td> <td></td> <td>15 (1%)</td>	Community	Free Clinic					15 (1%)
Diagnoses 1,069 (51%) Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 354 (17%) Date range: July 1993 (first encounter), Aug. 2022 (last encounter) Number of days between first and last encounter. Number of days between first and last encounter. 0, 10552 Select phecodes, mapped from diagnosis codes Phecode Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 221 250.11 GERD digestive 107 278.1 Obesity endocrine/metabolic 104 516 Comprehensive metabolic panel 3,754 516 CBC and differential 3,069 455	Atrium (Car	olinas Healthcare)					0
Labs 869 (41%) Vitals 743 (35%) Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 354 (17%) Date range: July 1993 (first encounter), Aug. 2022 (last encounter) Number of days between first and last encounter: Median (25 th , 75 th) 1929.5 (310, 3263.5) 0, 10552 Select phecodes, mapped from diagnosis codes 1929.5 (310, 3263.5) Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 114 512.8 Cough respiratory 112 530.11 GERD digestive 100 Select laboratory tests Test Labs Participants Comprehensive metabolic panel	Available I	EHR data domains					
Vitals743 (35%)Medications826 (39%)Allergies479 (23%)Immunizations372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data354 (17%)Date range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median $(25^{th}, 75^{th})$ 1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabs< Participants	Diagnoses					1,06	69 (51%)
Medications 826 (39%) Allergies 479 (23%) Immunizations 372 (18%) Problems 596 (28%) Procedures 472 (22%) Hospitalizations 354 (17%) Insights from available EHR data 354 (17%) Date range: July 1993 (first encounter), Aug. 2022 (last encounter) Number of days between first and last encounter: Median (25 th , 75 th) 1929.5 (310, 3263.5) Min, Max O, 10552 Select phecodes, mapped from diagnosis codes Phecode Phecode Description Group n, ppts 401.1 Essential hypertension circulatory system 232 272.1 Hyperlipidemia endocrine/metabolic 221 250.2 Type 2 diabetes endocrine/metabolic 114 512.8 Cough respiratory 112 530.11 GERD digestive 107 278.1 Obesity endocrine/metabolic 100 Select laboratory tests Test Labs Participants Comprehensive metabolic panel	Labs					86	69 (41%)
Allergies $479 (23\%)$ Immunizations $372 (18\%)$ Problems $596 (28\%)$ Procedures $472 (22\%)$ Hospitalizations $354 (17\%)$ Insights from available EHR data $354 (17\%)$ Date range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median $(25^{th}, 75^{th})$ 1929.5 ($310, 3263.5$)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsComprehensive metabolic panel3,754Comprehensive metabolic panel3,754CBC1,688331	Vitals				743 (35%)		
Allergies479 (23%)Immunizations372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data354 (17%)Date range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupAllersi232272.1Hyperlipidemiaendocrine/metabolic401.1Essential hypertensioncirculatory system232Type 2 diabetesendocrine/metabolic250.2Type 2 diabetesendocrine/metabolic250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic278.1Obesityendocrine/metabolic372107278.1Obesityendocrine/metabolic28Congh3,754516CBC and differential3,0694551,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331	Medications	5			826 (39%)		
Immunizations372 (18%)Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR data354 (17%)Date range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25 th , 75 th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupA01.1Essential hypertensioncirculatory system232Type 2 diabetesendocrine/metabolic212250.2Type 2 diabetesendocrine/metabolic250.2Type 2 diabetesendocrine/metabolic250.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331	Allergies						
Problems596 (28%)Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR dataDate range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupPhecodeDescriptioncirculatory system232272.1Hyperlipidemia401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic212250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolicComprehensive metabolic panel3,754CBC1,813A491,650Lipid panel1,457A491,688A31	Ŭ	ons			· · · ·		
Procedures472 (22%)Hospitalizations354 (17%)Insights from available EHR dataJaste range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodePhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsComprehensive metabolic panel3,754CBC1,688Hemoglobin A1C1,813Lipid panel1,457GBC1,688	Problems	· · · · · · · · · · · · · · · · · · ·		. ,			
Hospitalizations354 (17%)Insights from available EHR dataDate range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC1,650388Hemoglobin A1C1,813349Lipid panel1,457349349							
Insights from available EHR dataDate range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroup401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic250.2Type 2 diabetesendocrine/metabolic212.5Type 2 diabetesendocrine/metabolic213.1GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331				· · · · ·			
Date range: July 1993 (first encounter), Aug. 2022 (last encounter)Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC1,6503881,650Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331							
Number of days between first and last encounter:Median (25th, 75th)1929.5 (310, 3263.5)Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331	•						
Min, Max0, 10552Select phecodes, mapped from diagnosis codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331	-						,
Select phecodes, mapped from diagnosi s codesPhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331	Median (25	th , 75 th)			1929.5 (
PhecodeDescriptionGroupn, ppts401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331							0, 10552
401.1Essential hypertensioncirculatory system232272.1Hyperlipidemiaendocrine/metabolic221250.2Type 2 diabetesendocrine/metabolic114512.8Coughrespiratory112530.11GERDdigestive107278.1Obesityendocrine/metabolic100Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331	-				les		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					ovetem		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						ic	
512.8 Cough respiratory 112 530.11 GERD digestive 107 278.1 Obesity endocrine/metabolic 100 Select laboratory tests Test Labs Participants Comprehensive metabolic panel 3,754 516 516 CBC and differential 3,069 455 388 Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331							
530.11 GERD digestive 107 278.1 Obesity endocrine/metabolic 100 Select laboratory tests 100 Select laboratory tests 100 Test Labs Participants 516 CBC and differential 3,069 455 TSH 1,650 388 Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331							
Select laboratory testsTestLabsParticipantsComprehensive metabolic panel3,754516CBC and differential3,069455TSH1,650388Hemoglobin A1C1,813349Lipid panel1,457349CBC1,688331		GERD			e 107		
Test Labs Participants Comprehensive metabolic panel 3,754 516 CBC and differential 3,069 455 TSH 1,650 388 Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331	278.1	Obesity	endocr	ine	/metabol	ic	100
Comprehensive metabolic panel 3,754 516 CBC and differential 3,069 455 TSH 1,650 388 Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331		oratory tests				_	
CBC and differential 3,069 455 TSH 1,650 388 Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331						Par	
TSH 1,650 388 Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331							
Hemoglobin A1C 1,813 349 Lipid panel 1,457 349 CBC 1,688 331							
Lipid panel 1,457 349 CBC 1,688 331							
CBC 1,688 331							
Basic metabolic panel 2,157 326					1,688		
	Basic metal	polic panel			2,157		326

ionow-up sui veys and electronic near	
New medical condition diagnoses re 15 of 34 solicited medical conditions, list	
Asthma	466 / 492 (959
Osteoarthritis	329 / 1,556 (219
High cholesterol	295 / 1,170 (259
High blood pressure	249 / 1,156 (229
Osteoporosis/Osteopenia	220 / 1,840 (129
Rheumatoid arthritis	219 / 1,863 (129
Obesity	215 / 1,284 (179
Emphysema or "COPD"	197 / 1,803 (119
Depression	190 / 1,299 (159
Skin cancer, not melanoma	176 / 1,893 (99
Diabetes	166 / 1,667 (109
Other autoimmune disease	158 / 1,942 (89
Thyroid disease	151 / 1,767 (99
Other mental illness	134 / 1,931 (79
Coronary artery disease	114 / 1,970 (69
Procedures reported in follow up	
CT or MRI scan	1,352 (649
Chest x-ray	1,180 (569
Joint x-ray	1,079 (519
Heart/cardiac stress test	652 (319
Joint replacement	270 (139
Heart/cardiac catheterization	208 (109
Heart/cardiac angioplasty or stent	96 (59
Coronary artery bypass surgery	53 (39
Hospitalizations reported in follow u	o
Participants reporting 1 or more hospita	lizations 930 (449
Unique hospitalizations reported	1,5
Median (25th, 75th) hospitalizations repo	rted 2 (1,
Coded reasons for self-reported hospita listed in descending frequency	alization Events Participa
Uncoded	1,172 5
Surgery	228 1
Knee replacement	133
Pneumonia	119
Chest pain	81
Fracture	62
Body mass index (BMI) at most received	nt completed follow up
<18.5 (underw eight)	25 (19
18.5 - 24.9 (normal w eight)	383 (219
25 - 29.9 (overweight)	535 (299
30+	872 (489
Medications, vitamins, supplements	at most recent follow up
Median (25th, 75th) reported	7 (3, 1
10+ reported, n (%)	577 (279
Top 5 reported medications	
Albuterol	375 (189
Levothyroxine	306 (159
Omeprazole	294 (149