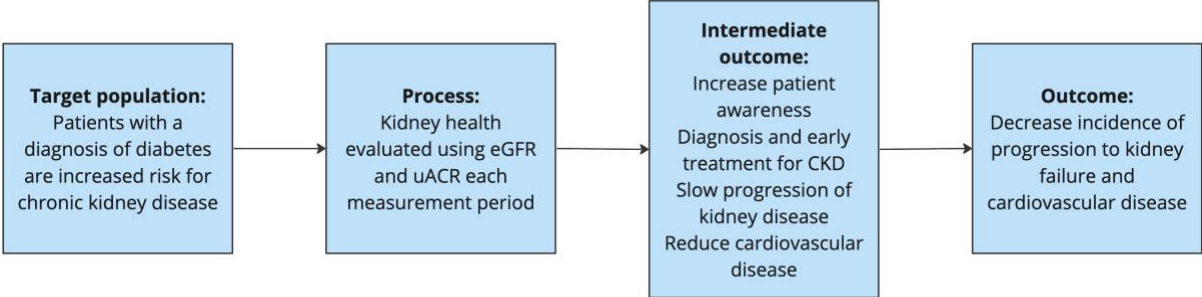


Section 2.1 Kidney Health Evaluation Logic Model

Patients with a diagnosis of diabetes are at increased risk of developing CKD and an annual kidney health evaluation using eGFR and uACR allows clinicians to identify and potentially treat or delay its progression. In addition, by increasing performance on these tests it will address the issues of under-recognition and under-diagnosis as many patients are not aware of their own kidney health status and/or a diagnosis of CKD.



Section 2.4 Performance Gap

Table 1. Clinician-Level Measurement Year Score (rate as %), overall

N of Clinicians	N of Patients	Mean score	STD of score	Deciles of performance score, rate as %												
				Min	10th	20th	30th	40th	Median	60th	70th	80th	90th	Max	Q1	Q3
60	2,950	9.9	14.8	0.0	0.0	0.0	0.0	4.2	6.8	9.3	10.7	16.0	23.3	100.0	0.0	11.4

Table 2. Number of Entities and Total Patients by Clinician-Level Measurement Year Score Range

Decile Range	Deciles of performance score, rate as %							
	Min to 30th	30th to 40th	40th to 50th	50th to 60th	60th to 70th	70th to 80 th	80th to 90th	90th to Max
Score Range	0.0	> 0 to 4.2	>4.2 to 6.8	>6.8 to 9.3	> 9.3 to 10.7	> 10.7 to 16.0	> 16.0 to 23.3	> 23.3 to 100.0
Mean Score	0.0	3.3	5.7	8.4	9.9	12.3	20.1	40.7
Entities (total=60)	19	6	5	6	6	6	6	6
Total Persons (total=2,950)	84	308	247	554	681	247	317	512

Section 4.1.3 Characteristics of Measure Entities

Table 3. Number of patients per clinician

Deciles of size: patients per clinician												
Min	10th	20th	30th	40 th	Median	60th	70th	80th	90th	Max	Q1	Q3
1	1	3	7	13	24	34	55	74	139	306	5	67

Section 4.1.4 Characteristics of Units of the Eligible Population

Table 4. Characteristics of denominators

	Ns	%
Total	2,950	100.0
Characteristics		
Age		
18-45	308	10.4
46-55	445	15.1
56-65	761	25.8
66-75	914	31.0
76-85	522	17.7
Sex		
Female	1,495	50.7
Male	1,455	49.3
Race		
AI/AN	23	0.8
API	13	0.4
Black	223	7.6
White	2,522	85.5
Missing	169	5.7

	Ns	%
Hispanic		
HL	67	2.3
N/HL	2,704	91.7
Missing	179	6.1

Section 4.2.3 Reliability Testing Results

Table 5. Clinician-level estimates of reliability on measurement year score

N of Clinicians	Mean	STD	Min	10th Pctl	Q1	Median	Q3	90th Pctl	Max
60	0.739	0.272	0.042	0.291	0.636	0.800	1.000	1.000	1.000

Table 6. Number of entities and patients by reliability deciles

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8
Reliability	0.739	0.042	0.291	0.540	0.661	0.716	0.800	0.846	0.968	1.00
Entities	60	1	5	6	5	7	6	6	4	20
Total Persons	2,950	3	54	181	182	322	737	671	715	85

Section 4.3.4 Validity Testing Results

Table 7. Validity testing on data elements for Site 1

Data element	Manual abstraction (gold standard)	EHR automated report	Percentage of agreement	Kappa*	Sensitivity	Specificity	PPV	NPV
Ethnicity	100.00	77.65	77.65	0.00	77.65	n.a.	100.00	0.00
Race	100.00	77.65	77.65	0.00	77.65	n.a.	100.00	0.00
Sex/ Gender	100.00	100.00	100.00	0.00	100.00	n.a.	100.00	n.a.
Age	100.00	100.00	100.00	0.00	100.00	n.a.	100.00	n.a.
Diabetes diagnosis	100.00	100.00	100.00	0.00	100.00	n.a.	100.00	n.a.
Annual wellness visit	0.00	0.00	100.00	0.00	n.a.	100.00	n.a.	100.00
Office visit	80.00	78.82	96.47	0.892	97.06	94.12	98.51	88.89
Preventive care visit – established office visit, 18+	17.65	0.00	82.35	0.00	0.00	100.00	0.00	82.35
CKD Stage 5	0.00	45.88	54.12	0.00	n.a.	54.12	0.00	100.00
ESRD	0.00	45.88	54.12	0.00	n.a.	54.12	0.00	100.00
eGFR	42.35	2.35	55.29	-0.047	0.00	95.92	0.00	56.63
UACR	63.53	2.35	38.82	0.027	3.70	100.00	100.00	37.35

* When the percent of “Yes” in Manual abstraction or Automated equals 100% or 0%, the value for kappa equals zero. This is referred to as the kappa paradox (Derksen, Bastiaan M., et al. "The Kappa Paradox Explained." *The Journal of Hand Surgery* (2024).)

Table 8. Validity testing on data elements for Site 2

Data element	Manual abstraction (gold standard)	EHR automated report	Percentage of agreement	Kappa*	Sensitivity	Specificity	PPV	NPV
Ethnicity	100.00	95.29	95.29	0.00	95.29	n.a.	100.00	0.00
Race	100.00	100.00	100.00	0.00	100.00	n.a.	100.00	n.a.
Sex/Gender	100.00	100.00	100.00	0.00	100.00	n.a.	100.00	n.a.
Age	100.00	100.00	100.00	0.00	100.00	n.a.	100.00	n.a.
Diabetes diagnosis	98.82	96.47	95.29	-0.018	96.43	0.00	98.78	0.00
Annual wellness visit	7.06	0.00	92.94	0.00	0.00	100.00	n.a.	92.94
Office visit	87.06	87.06	92.94	0.687	95.95	72.73	95.95	72.73
Preventive care visit – established office visit, 18+	9.41	20.00	92.94	0.495	87.50	87.01	41.18	98.53
CKD Stage 5	1.18	4.71	96.47	0.389	100.00	96.43	25.00	100.00
ESRD	9.41	9.41	100.00	1.000	100.00	100.00	100.00	100.00
eGFR	56.47	41.18	68.24	0.379	58.33	81.08	80.00	60.00
UACR	30.59	2.35	69.41	0.029	3.85	98.31	50.00	69.88

* When the percent of “Yes” in Manual abstraction or Automated equals 100% or 0%, the value for kappa equals zero. This is referred to as the kappa paradox (Derksen, Bastiaan M., et al. "The Kappa Paradox Explained." *The Journal of Hand Surgery* (2024).)

Section 5.1 Contributions Towards Advancing Health Equity

Table 9. Clinician-Level Measurement Year Score (rate as %), by stratification variables

	N of Clinicians	N of Patients	Mean score	STD of score	Deciles of performance score, rate as %									
					Min-30th	40 th	Median	60th	70th	80th	90th	Max	Q1	Q3
Age														
18-45	45	308	5.9	8.5	0.0	0.0	0.0	4.7	9.1	12.9	18.2	33.3	0.0	10.5
46-55	47	445	9.2	14.5	0.0	0.0	0.0	5.9	11.1	18.2	33.3	57.1	0.0	15.7
56-65	52	761	13.5	21.0	0.0	0.0	6.0	12.5	16.7	23.1	28.0	100.0	0.0	20.0
66-75	46	914	11.3	17.4	0.0	0.0	6.0	10.2	15.4	20.0	30.0	100.0	0.0	17.3
76-85	45	522	10.3	18.8	0.0	0.0	0.0	5.9	9.1	18.5	33.3	100.0	0.0	11.1
Sex														
Female	54	1,495	10.5	16.4	0.0	2.1	6.2	9.4	11.4	14.8	28.6	100.0	0.0	12.7
Male	56	1,455	10.2	16.6	0.0	1.4	8.0	8.7	11.1	15.7	23.8	100.0	0.0	12.5
Race														
AI/AN*	**	23	**	**	**	**	**	**	**	**	**	**	**	**
API*	**	13	**	**	**	**	**	**	**	**	**	**	**	**
Black	31	223	13.1	25.5	0.0	0.0	0.0	0.0	13.6	20.0	29.0	100.0	0.0	20.0
White	58	2,522	10.0	15.1	0.0	4.5	7.5	9.2	10.7	12.5	27.6	100.0	0.0	11.1
Hispanic														
HL	28	67	17.0	33.5	0.0	0.0	0.0	0.0	0.0	33.3	100.0	100.0	0.0	16.7
N/HL	59	2,704	10.4	15.2	0.0	4.5	7.1	10.0	11.1	16.7	26.7	100.0	0.0	12.5

*Data points are too small to calculate performance across the deciles.

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