

SUPPLEMENTAL INFORMATION

Supplemental Table S1 Demographic characteristics of those using healthcare services in Harjun terveys 2023-2025. Comparison of age, sex distribution, and comorbidity burden between users of digital clinic services and those utilizing only traditional care modalities. CCI = Charlson Comorbidity Index. Age was compared using a two-sided Mann-Whitney U test, given the non-normal distribution of age in both groups and CCI prevalence compared using chi-square test.

	2023			2024			2025		
	Digital user	Traditional user	P-value	Digital user	Traditional user	P-value	Digital user	Traditional user	P-value
Patients (n)	17,581	54,066	-	22,343	49,635	-	25,142	42,742	-
Patients (% of total)	24.5%	75.5%	-	31.0%	69.0%	-	37.0%	63.0%	-
Mean age, years (SD)	32.5 (21.2)	52.9 (24.6)	< .001	32.2 (20.9)	54.5 (24.2)	< .001	34.6 (21.9)	55.7 (24.1)	< .001
Median age (IQR)	30.0 (31.0)	60.0 (40.0)	< .001	30.0 (31.0)	62.0 (38.0)	< .001	32.0 (33.0)	63.0 (37.0)	< .001
Female (%)	63.9%	55.1%	< .001	62.3%	55.1%	< .001	62.7%	54.6%	< .001
Male (%)	36.1%	44.9%	< .001	37.7%	44.9%	< .001	37.3%	45.4%	< .001
CCI ≥ 1 (%)	13.5%	30.4%	< .001	12.4%	31.1%	< .001	13.5%	30.7%	< .001

Supplemental Table S2 Sensitivity of annual service coverage estimates for 2021-2023 to alternative values of the empirical overlap fraction ϕ . ϕ = empirical overlap fraction, defined as the proportion of unique digital clinic users who also had at least one traditional primary care encounter in the same calendar year. $\phi = 0.0$: upper bound, assumes zero overlap between systems (all digital patients are genuinely new unique individuals not captured in the EHR). $\phi = 1.0$: lower bound, assumes complete overlap (all digital patients already appear in the EHR). Primary estimate uses $\phi = 0.599$, derived as the mean overlap fraction across 2024 and 2025, the years in which both digital and traditional encounter records share a common patient identifier within the EHR. N_{EHR} = unique patients identified in the primary EHR for that year. $N_{digital}$ = unique patients identified in the separate digital administrative system. Corrected coverage (%) = $(N_{EHR} + N_{digital} \times (1 - \phi)) / \text{population} \times 100$. Shaded rows indicate the primary analysis estimate. Population denominators derived from national population registry data [13]; 2024 data used as proxy for 2025.

Year	ϕ value	Unique patients, EHR (N_{EHR})	Unique patients, digital system ($N_{digital}$)	Corrected coverage (%)	Notes
2021	0.0	42,244	12,993	41.4%	Upper bound (zero overlap assumed)
2021	0.2	42,244	12,993	39.4%	
2021	0.4	42,244	12,993	37.5%	
2021	0.6	42,244	12,993	35.5%	Primary estimate (ϕ derived from 2024-2025 linked data)
2021	0.8	42,244	12,993	33.6%	Lower bound (full overlap assumed)
2021	1.0	42,244	12,993	31.7%	
2022	0.0	48,285	15,775	48.0%	Upper bound (zero overlap assumed)

2022	0.2	48,285	15,775	45.6%	
2022	0.4	48,285	15,775	43.3%	
2022	0.6	48,285	15,775	40.9%	Primary estimate (ϕ derived from 2024-2025 linked data)
2022	0.8	48,285	15,775	38.5%	
2022	1.0	48,285	15,775	36.2%	Lower bound (full overlap assumed)
2023	0.0	56,062	2,877	44.1%	Upper bound (zero overlap assumed)
2023	0.2	56,062	2,877	43.6%	
2023	0.4	56,062	2,877	43.2%	
2023	0.6	56,062	2,877	42.8%	Primary estimate (ϕ derived from 2024-2025 linked data)
2023	0.8	56,062	2,877	42.3%	
2023	1.0	56,062	2,877	41.9%	Lower bound (full overlap assumed)