

CHAPTER 2

DIALYSIS IN MALAYSIA

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SECTION 2.1: PROVISION OF DIALYSIS IN MALAYSIA**2.1.1: Dialysis treatment provision****Table 2.1.1(a): Stock and flow - Dialysis Patients, Malaysia 2016-2025**

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
Died	7994	7625	7558	8041	9104	6358	6496	6153	5949	5402
Transplanted	234	222	244	178	64	143	125	72	84	66
Lost to Follow-up	61	51	41	37	33	34	37	56	39	31
Dialysing at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603

Table 2.1.1(b): Stock and flow - HD Patients, Malaysia 2016-2025

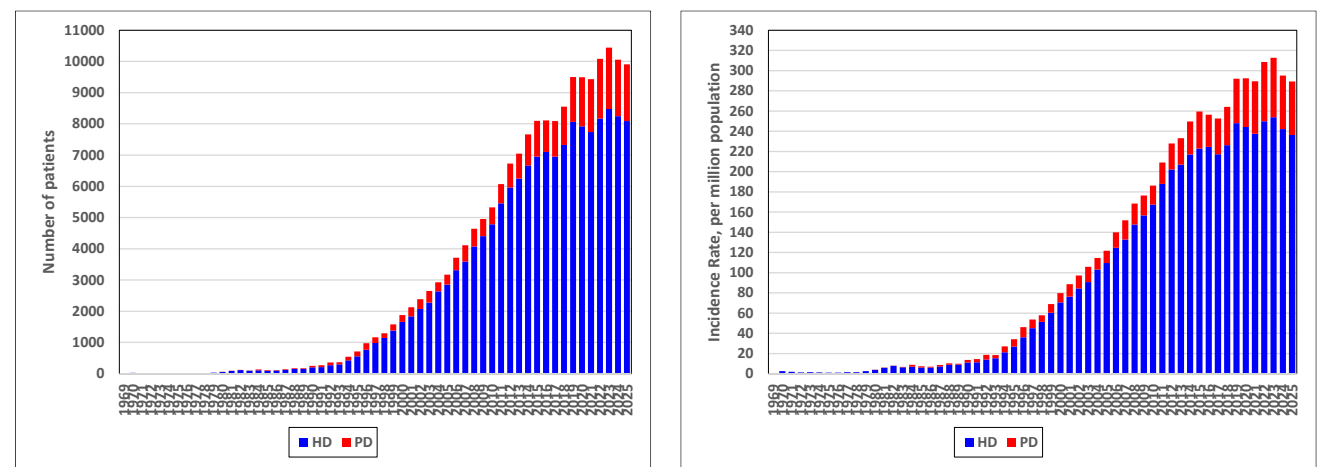
Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New HD patients	8089	8249	8479	8170	7738	7923	8066	7324	6955	7104
Died	6788	6470	6444	6857	7935	5476	5603	5334	5174	4671
Transplanted	186	170	200	145	53	112	93	47	75	60
Lost to Follow-up	56	47	34	34	26	31	34	49	37	29
Dialysing at 31 st December	50833	49339	47979	45859	44633	44883	42516	40194	38264	36626

Table 2.1.1(c): Stock and flow - PD Patients, Malaysia 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New PD patients	1816	1807	1967	1917	1696	1569	1433	1230	1134	1006
Died	1206	1155	1114	1184	1169	882	893	819	775	731
Transplanted	48	52	44	33	11	31	32	25	9	6
Lost to Follow-up	5	4	7	3	7	3	3	7	2	2
Dialysing at 31 st December	6805	6810	6683	6362	5926	5529	4982	4564	4286	3977

Figure 2.1.1: New Dialysis (Haemodialysis & Chronic PD) Incidence Rate per Million Population, Malaysia 1969-2025

(a) Number of New Dialysis Incidence, Malaysia 1969-2025 (b) New Dialysis Incidence Rates, Malaysia 1969-2025



2.1.2: Geographic distribution

There was a total of 9,905 new dialysis patients in 2025 comprising 8089 new HD and 1,816 new PD patients. Eight states recorded an AR of between 300 to 399, 5 states had an AR of between 200 to 299 pmp and 1 state reported an AR of less than 200 pmp. The state with the highest AR was Melaka (376 pmp) followed by Negeri Sembilan (367 pmp), Kedah (355 pmp), Perak (347 pmp) and Pulau Pinang (341 pmp). Sabah remains the state with the lowest acceptance rate (150 pmp) followed by Perlis (249 pmp), Selangor (265 pmp), Kelantan (277 pmp) and Pahang (289 pmp). The west coast states of Peninsular Malaysia had higher AR compared with the east coast states of Peninsular Malaysia followed by East Malaysian states.

Table 2.1.2(a): Dialysis Treatment Rate by State (New Dialysis), per million population 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Johor	313	330	342	355	337	343	362	333	342	340
Kedah	355	326	380	299	346	301	317	294	284	276
Kelantan	277	252	295	249	205	240	230	209	176	220
Melaka	376	398	400	456	397	369	380	347	300	304
Negeri Sembilan	367	394	388	373	399	361	412	394	365	358
Pahang	289	320	306	331	316	271	279	237	227	226
Perak	347	339	354	409	371	415	392	319	284	285
Perlis	249	273	205	217	174	172	181	245	167	183
Pulau Pinang	341	372	354	381	363	386	366	326	334	362
Sabah & WP Labuan	150	152	166	161	143	131	139	113	115	128
Sarawak	295	271	298	302	254	250	221	174	193	174
Selangor & WP Putrajaya	265	264	290	264	241	256	269	256	220	216
Terengganu	325	376	355	356	365	375	347	319	279	277
WP Kuala Lumpur	302	345	385	372	352	373	375	377	422	448

Table 2.1.2(b): Dialysis Treatment Rate by State (Dialysis at 31st Dec), per million population 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Johor	2049	2024	2033	2022	1971	1967	1999	1921	1870	1785
Kedah	1848	1768	1741	1639	1655	1624	1510	1429	1361	1301
Kelantan	1296	1246	1202	1113	1075	1111	971	916	858	828
Melaka	2202	2158	2087	2017	1889	1811	1807	1698	1597	1545
Negeri Sembilan	2183	2133	2078	2046	2013	1973	1991	1857	1780	1724
Pahang	1668	1654	1614	1583	1532	1469	1334	1267	1200	1174
Perak	2081	2011	2075	2068	2016	2020	1846	1688	1605	1577
Perlis	1131	1122	1075	1014	949	955	1024	1061	1044	988
Pulau Pinang	2013	2034	2017	2020	1983	1993	1861	1803	1797	1780
Sabah & WP Labuan	847	812	811	815	785	781	666	610	584	551
Sarawak	1893	1821	1779	1676	1572	1518	1229	1144	1095	1019
Selangor & WP Putrajaya	1474	1423	1403	1334	1286	1344	1362	1285	1230	1203
Terengganu	1858	1880	1844	1849	1830	1795	1518	1384	1291	1206
WP Kuala Lumpur	1841	1888	1893	1867	1839	1864	1981	1980	1941	1892

2.1.3: Gender distribution

The acceptance rate for males has remained higher compared with females. However, over the last decade there has been a modest trend toward narrowing of the gap.

Table 2.1.3(a): Dialysis Treatment Rate by Gender, per million male or female population 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
ALL										
Male	304	305	321	323	297	300	312	280	266	273
Female	274	284	303	292	282	284	271	248	238	238
HD										
Male	247	251	261	262	242	251	265	241	231	241
Female	224	232	246	236	232	237	230	210	203	207
PD										
Male	56	54	60	61	54	49	47	38	36	32
Female	50	52	57	56	49	47	41	38	35	32

Figure 2.1.3(a) (i): Dialysis Treatment Rate by Gender 1969-2025

Figure 2.1.3(a) (ii): HD Treatment Rate by Gender 1969-2025

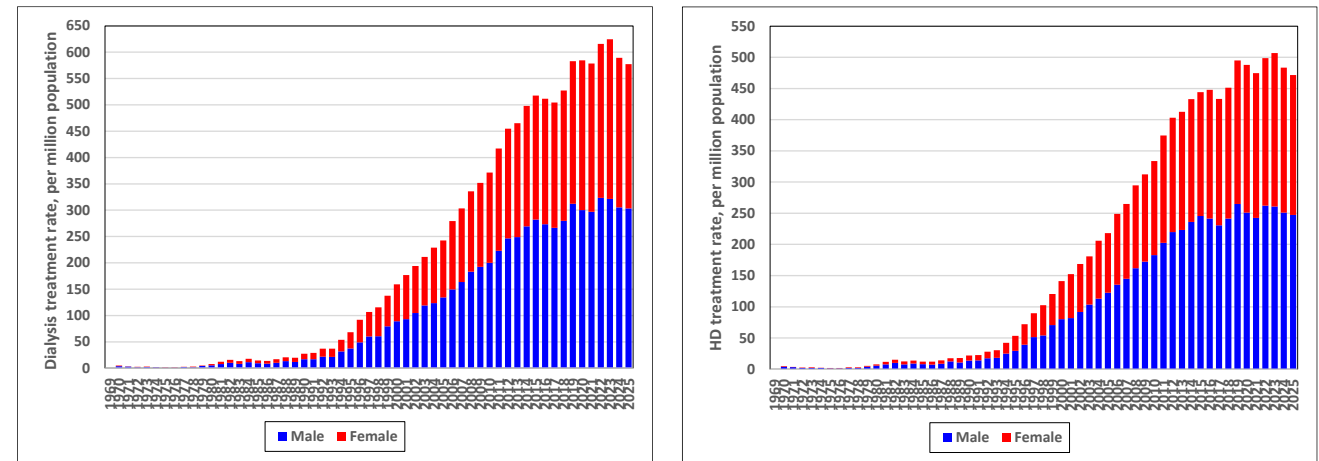
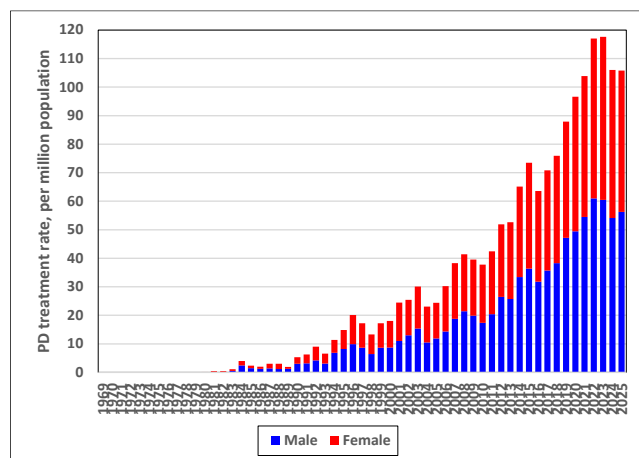
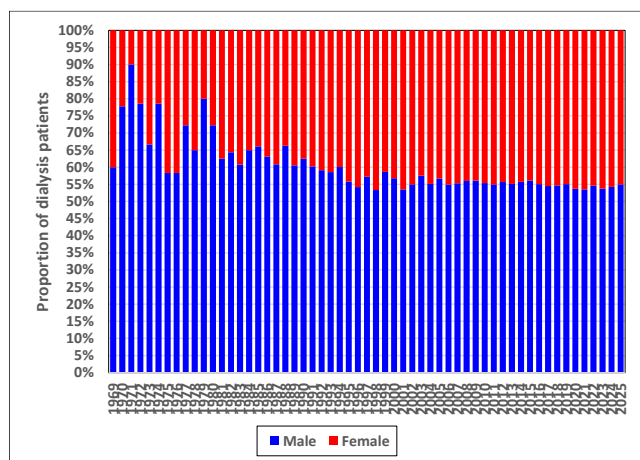
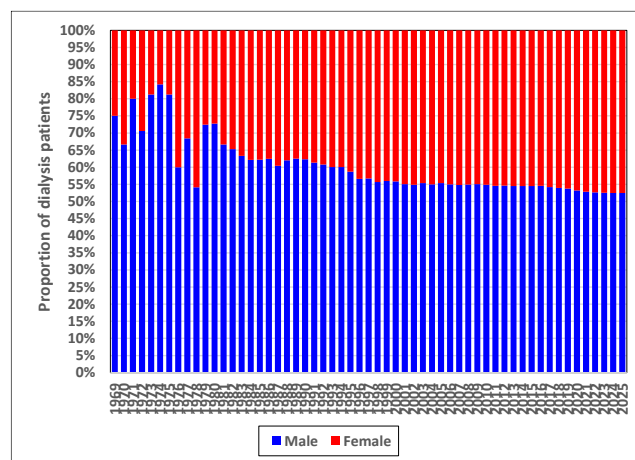


**Figure 2.1.3(a) (iii): PD Treatment Rate by Gender
1980-2025****Table 2.1.3(b): Gender Distribution of Dialysis Patients 2016-2025**

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% Male	55.0	54.3	53.8	54.6	53.5	53.7	55.1	54.7	54.5	55.1
% Female	45.0	45.7	46.2	45.4	46.5	46.3	44.9	45.3	45.5	44.9
ESKD patients at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
% Male	52.4	52.5	52.5	52.7	52.8	53.2	53.8	53.9	54.2	54.5
% Female	47.6	47.5	47.5	47.3	47.2	46.8	46.2	46.1	45.8	45.5
New HD patients	8089	8249	8479	8170	7738	7923	8066	7324	6955	7104
% Male	54.9	54.4	53.8	54.7	53.3	53.7	55.1	55.1	54.9	55.5
% Female	45.1	45.6	46.2	45.3	46.7	46.3	44.9	44.9	45.1	44.5
HD patients at 31 st December	50833	49339	47979	45859	44633	44883	42516	40194	38264	36626
% Male	52.6	52.6	52.7	52.9	53.1	53.5	54.1	54.4	54.7	55.1
% Female	47.4	47.4	47.3	47.1	46.9	46.5	45.9	45.6	45.3	44.9
New PD patients	1816	1807	1967	1917	1696	1569	1433	1230	1134	1006
% Male	55.6	53.6	53.7	54.2	54.6	53.5	55.2	52.0	52.0	51.7
% Female	44.4	46.4	46.3	45.8	45.4	46.5	44.8	48.0	48.0	48.3
PD patients at 31 st December	6805	6810	6683	6362	5926	5529	4982	4564	4286	3977
% Male	51.6	51.5	51.4	50.9	50.7	50.8	50.9	49.8	50.0	49.5
% Female	48.4	48.5	48.6	49.1	49.3	49.2	49.1	50.2	50.0	50.5

Figure 2.1.3(b) (i): Gender Distribution of Dialysis Patients 1969-2025

(i) New Dialysis patients

(ii) ESKD Patients at 31st December**Figure 2.1.3(b) (ii): Gender Distribution of HD Patients 1969-2025**

(i) New HD patients

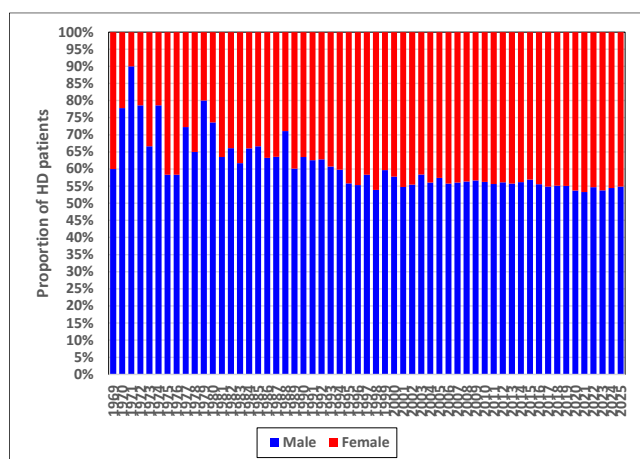
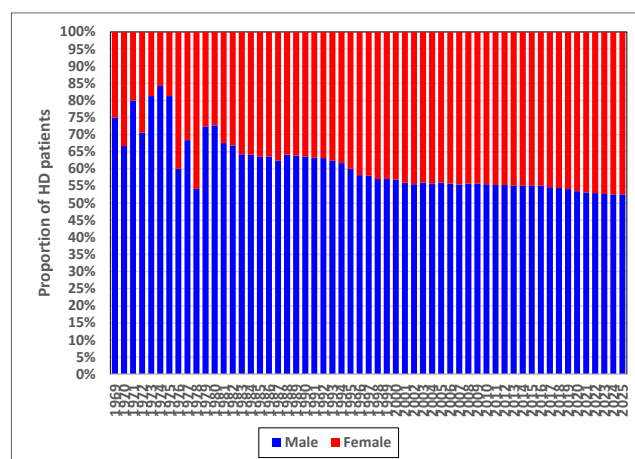
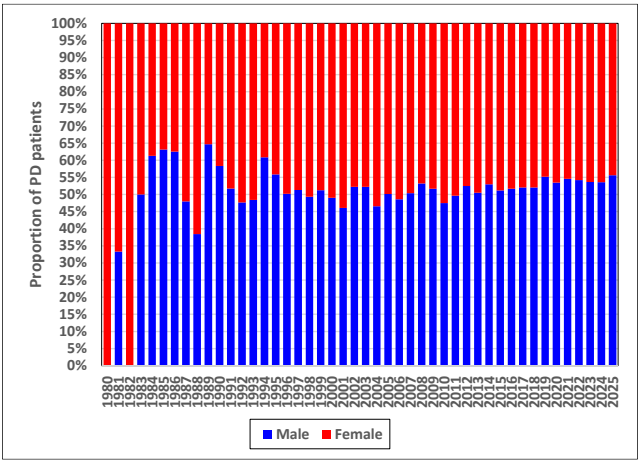
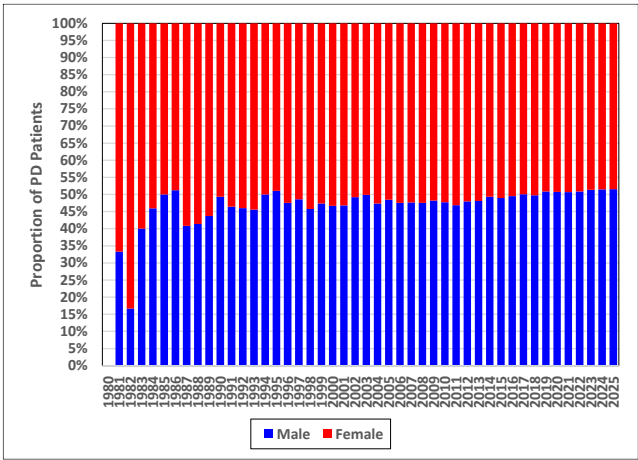
(ii) HD Patients at 31st December

Figure 2.1.3(b) (iii): Gender Distribution of PD Patients 1980-2025

(i) New PD patients



(ii) PD Patients at 31st December



2.1.4: Age distribution

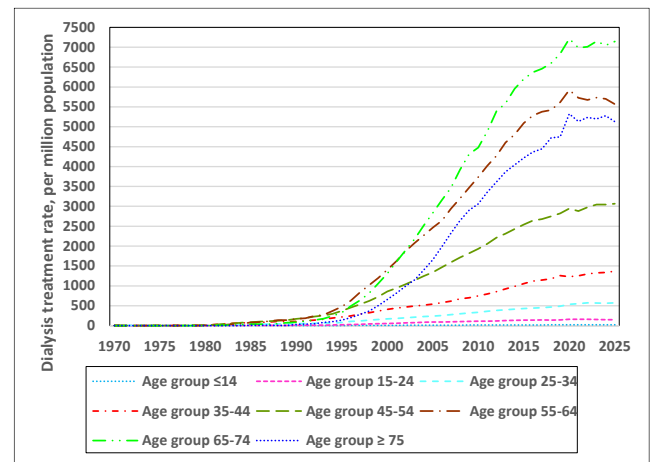
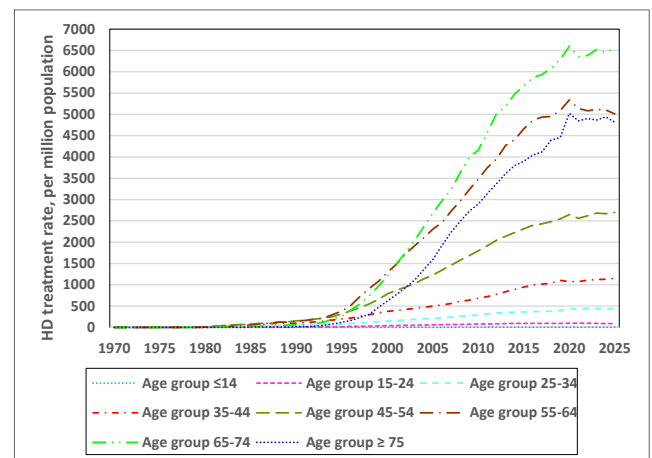
As can be expected, the treatment rate is age dependent with the highest incidence among the elderly (Figure 2.1.4a). The mean (55.5 years) and median age (57 years) have not changed substantially over the last 10 years. The mean and median age of patients on PD is 6 years younger than HD (Table 2.1.4(a)).

The highest incidence and prevalence of dialysis is among those 65-74 years old. The reasons for a lower incidence and prevalence of dialysis among those ≥ 75 years old could include issues with access to dialysis, choice of conservative (nondialytic) management of ESKD, and higher mortality rate among these patients.

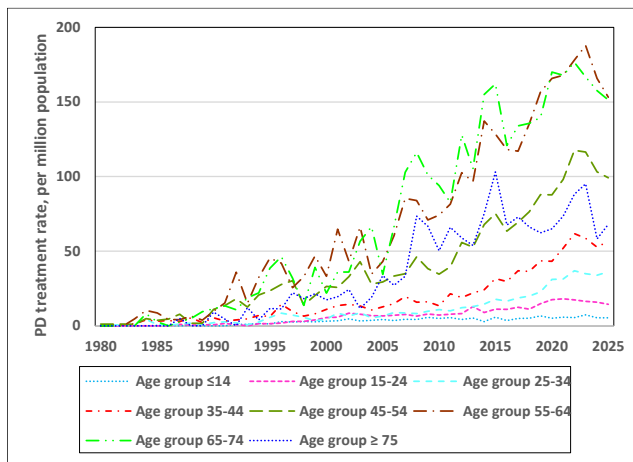
Table 2.1.4(a): Dialysis Treatment Rate by Age Group, per million age group population 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
≤ 14	6	7	8	7	7	7	9	7	7	6
15-24	32	31	35	38	39	36	37	32	31	32
25-34	112	105	113	118	100	102	92	89	81	81
35-44	246	255	261	253	232	231	250	216	209	212
45-54	559	576	621	609	553	598	600	563	541	574
55-64	946	1039	1111	1079	1110	1122	1132	1046	1027	1085
65-74	1140	1174	1265	1285	1245	1306	1302	1194	1212	1194
≥ 75	737	752	824	919	787	800	829	808	726	762
Overall Mean age (yrs)	55.6	55.6	55.6	55.6	55.8	55.8	55.7	55.7	55.7	55.5
Overall SD age	14.2	14.0	14.1	14.3	14.1	13.9	14.1	14.0	13.9	13.8
Overall Median age (yrs)	57.3	57.3	57.4	57.3	57.8	57.6	57.5	57.5	57.3	57.1
New HD patients	8089	8249	8479	8170	7738	7923	8066	7324	6955	7104
≤ 14	1	2	1	2	1	2	2	2	2	3
15-24	18	15	19	21	21	18	22	21	19	21
25-34	76	71	78	81	69	71	70	69	63	64
35-44	189	202	202	191	180	188	207	180	173	182
45-54	460	473	504	491	455	510	512	486	471	511
55-64	793	873	923	901	942	956	975	911	910	967
65-74	989	1016	1098	1109	1077	1136	1162	1059	1078	1073
≥ 75	670	694	729	831	713	735	766	742	653	695
HD Mean age (yrs)	56.9	56.7	56.8	56.9	57.0	56.8	56.7	56.5	56.6	56.2
HD SD age	13.5	13.3	13.3	13.6	13.2	13.1	13.4	13.4	13.1	13.2
HD Median age (yrs)	58.3	58.2	58.1	58.2	58.5	58.3	58.1	57.9	57.9	57.3
New PD patients	1816	1807	1967	1917	1696	1569	1433	1230	1134	1006
≤ 14	5	5	7	5	6	5	7	5	5	3
15-24	14	16	16	17	18	18	15	11	12	11
25-34	36	34	35	37	31	31	23	20	19	17
35-44	57	53	59	62	52	43	43	36	37	30
45-54	99	103	116	117	98	88	88	76	69	63
55-64	153	166	188	178	168	166	157	135	117	118
65-74	151	158	167	176	168	170	140	136	134	121
≥ 75	68	58	95	88	73	65	62	66	73	68
PD Mean age (yrs)	50.2	50.4	50.5	50.4	50.3	50.5	50.2	50.8	50.3	50.9
PD SD age	15.8	15.8	16.1	15.9	16.4	16.4	16.6	16.5	17.0	16.6
PD Median age (yrs)	51.6	52.3	52.8	52.6	53.0	54.0	53.4	54.0	53.3	54.0

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Dialysis patients at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
≤14	22	23	24	23	23	22	24	21	20	20
15-24	149	153	158	163	160	162	147	141	143	141
25-34	574	565	570	575	551	538	492	469	451	442
35-44	1367	1337	1328	1301	1252	1229	1256	1180	1146	1120
45-54	3066	3043	3042	2977	2880	2946	2821	2747	2680	2639
55-64	5570	5702	5733	5672	5725	5926	5614	5420	5379	5284
65-74	7141	7049	7151	7009	6985	7210	6837	6598	6461	6369
≥75	5129	5279	5198	5234	5132	5323	4748	4722	4442	4365
Overall Mean age (yrs)	56.7	56.6	56.5	56.4	56.4	56.5	56.4	56.3	56.1	56.0
Overall SD age	14.0	14.0	14.0	14.1	14.0	14.0	14.0	14.0	14.0	14.0
Overall Median age (yrs)	58.4	58.4	58.3	58.2	58.3	58.3	58.1	58	57.8	57.5
HD patients at 31 st December	50833	49339	47979	45859	44633	44883	42516	40194	38264	36626
≤14	7	7	6	6	6	7	9	8	8	7
15-24	89	93	95	99	98	101	95	94	97	96
25-34	442	436	440	444	432	433	403	385	371	370
35-44	1155	1131	1125	1108	1077	1075	1106	1042	1015	999
45-54	2701	2671	2684	2621	2560	2648	2545	2482	2430	2397
55-64	5012	5102	5115	5082	5139	5335	5088	4949	4933	4859
65-74	6551	6447	6522	6378	6354	6596	6288	6081	5933	5859
≥75	4816	4942	4867	4903	4845	5023	4453	4395	4120	4046
HD Mean age (yrs)	57.6	57.4	57.3	57.2	57.2	57.2	57.0	56.9	56.7	56.5
HD SD age	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
HD Median age (yrs)	59.0	59.0	58.9	58.8	58.8	58.8	58.6	58.4	58.1	57.9
PD patients at 31 st December	6805	6810	6683	6362	5926	5529	4982	4564	4286	3977
≤14	15	17	18	17	16	14	15	12	13	12
15-24	60	60	63	64	62	62	52	47	45	45
25-34	132	129	130	131	120	104	88	84	80	72
35-44	212	205	202	193	174	154	150	139	131	121
45-54	365	372	358	357	320	298	276	265	250	242
55-64	558	600	619	590	587	590	527	471	446	425
65-74	590	602	629	631	631	614	548	517	528	510
≥75	313	337	331	332	287	300	296	327	322	319
PD Mean age (yrs)	50.6	50.7	50.6	50.5	50.6	51.0	51.0	51.0	50.8	50.9
PD SD age	15.9	16.0	16.1	16.3	16.4	16.4	16.6	16.7	16.8	16.9
PD Median age (yrs)	52.3	52.6	53.0	52.9	53.5	54.3	54.2	54.1	53.8	53.9

(ii) ESKD Patients at 31st December(ii) HD Patients at 31st December

(i) New PD Patients



PD treatment rate, per million population

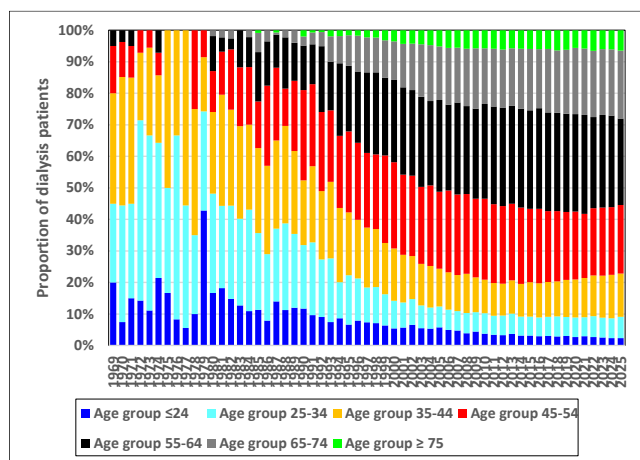
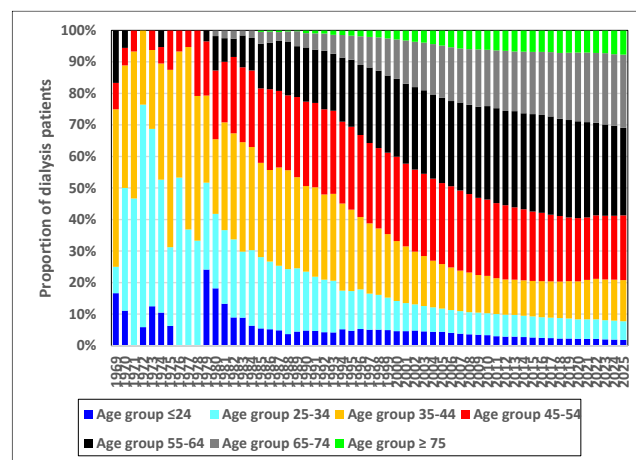
Age group ≤14 Age group 15-24 Age group 25-34
 Age group 35-44 Age group 45-54 Age group 55-64
 Age group 65-74 Age group ≥ 75

Table 2.1.4(b): Percentage Age Distribution of Dialysis Patients 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% ≤24	2.4	2.3	2.6	2.7	2.9	2.7	3.1	2.9	3.0	3.0
% 25-34	6.7	6.3	6.3	6.6	6.1	6.2	6.0	6.4	6.1	6.0
% 35-44	13.7	13.8	13.3	12.9	12.4	12.0	11.8	11.1	11.1	10.8
% 45-54	21.8	21.4	21.6	21.3	20.4	21.6	21.5	22.3	22.5	23.6
% 55-64	27.4	29.1	29.4	28.9	31.4	30.9	31.2	31.2	31.3	31.9
% 65-74	21.5	21.0	20.9	21.0	21.1	21.0	20.3	19.8	20.1	18.8
% ≥75	6.5	6.0	6.0	6.5	5.8	5.6	6.2	6.4	5.9	6.0
New HD patients	8089	8249	8479	8170	7738	7923	8066	7324	6955	7104
% ≤24	1.4	1.2	1.4	1.6	1.7	1.5	1.9	1.9	1.9	2.1
% 25-34	5.6	5.2	5.4	5.6	5.1	5.2	5.3	5.8	5.5	5.4
% 35-44	12.9	13.4	12.7	12.0	11.7	11.7	11.5	10.8	10.6	10.6
% 45-54	21.9	21.4	21.6	21.2	20.4	22.1	21.6	22.5	22.8	23.9
% 55-64	28.1	29.8	30.1	29.8	32.5	31.5	31.6	31.7	32.3	32.5
% 65-74	22.9	22.2	22.4	22.4	22.2	21.9	21.4	20.5	20.8	19.3
% ≥75	7.2	6.8	6.5	7.3	6.4	6.1	6.7	6.9	6.2	6.2
New PD patients	1816	1807	1967	1917	1696	1569	1433	1230	1134	1006
% ≤24	6.8	7.4	7.6	7.3	8.7	8.9	9.7	8.7	10.1	9.3
% 25-34	11.9	11.2	10.3	10.9	10.6	11.5	9.7	9.9	10.0	9.8
% 35-44	17.2	15.9	15.9	16.5	15.4	13.6	13.6	13.0	13.8	12.2
% 45-54	21.1	21.4	21.5	21.6	20.1	19.2	20.9	21.1	20.5	21.0
% 55-64	24.2	25.8	26.4	25.1	26.4	27.6	28.6	28.0	25.5	28.0
% 65-74	15.6	15.7	14.6	15.2	15.8	16.6	14.4	15.6	15.9	15.3
% ≥75	3.2	2.6	3.7	3.3	3.0	2.7	3.1	3.7	4.2	4.3
ESKD patients at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
% ≤24	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.5
% 25-34	5.9	6.0	6.1	6.3	6.2	6.2	6.4	6.4	6.4	6.5
% 35-44	13.1	13.0	12.9	12.8	12.5	12.0	11.9	11.6	11.5	11.5
% 45-54	20.5	20.3	20.2	20.1	19.8	20.0	20.2	20.8	21.2	21.6
% 55-64	27.8	28.6	29.0	29.4	30.2	30.7	30.9	30.9	31.2	31.1
% 65-74	23.2	22.6	22.6	22.1	22.1	21.9	21.3	20.9	20.4	20.0
% ≥75	7.7	7.6	7.2	7.2	7.0	7.0	7.1	7.2	6.9	6.8
HD patients at 31 st December	50833	49339	47979	45859	44633	44883	42516	40194	38264	36626
% ≤24	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8
% 25-34	5.2	5.3	5.3	5.5	5.5	5.6	5.8	5.9	5.9	6.1
% 35-44	12.5	12.5	12.5	12.4	12.2	11.8	11.7	11.4	11.3	11.3
% 45-54	20.5	20.3	20.3	20.2	19.9	20.2	20.4	20.9	21.3	21.8
% 55-64	28.3	29.1	29.5	30.0	30.7	31.0	31.3	31.4	31.8	31.7
% 65-74	24.1	23.5	23.5	22.9	22.7	22.5	21.9	21.4	20.8	20.4
% ≥75	8.2	8.1	7.7	7.6	7.5	7.4	7.4	7.4	7.1	7.0
PD patients at 31 st December	6805	6810	6683	6362	5926	5529	4982	4564	4286	3977
% ≤24	6.8	7.0	7.5	7.7	8.0	8.3	8.6	8.4	8.8	9.3
% 25-34	11.6	11.4	11.3	11.7	11.6	10.9	10.9	11.3	11.4	10.8
% 35-44	17.1	16.5	16.1	15.6	14.8	13.8	13.5	13.4	13.1	12.7
% 45-54	20.7	20.4	19.5	19.8	18.8	18.5	18.8	19.7	19.6	20.2
% 55-64	23.6	24.8	25.6	25.1	26.4	27.9	27.7	26.3	25.7	25.5
% 65-74	16.2	15.9	16.3	16.4	17.0	17.0	16.3	16.0	16.5	16.3
% ≥75	4.0	4.0	3.8	3.7	3.4	3.6	4.2	4.9	4.9	5.1

Figure 2.1.4(b) (i): Age Distribution of Dialysis Patients 1969-2025

(i) New Dialysis Patients

(ii) ESKD Patients at 31st December**Figure 2.1.4(b) (ii): Age Distribution of HD Patients 1969-2025**

(i) New HD patients

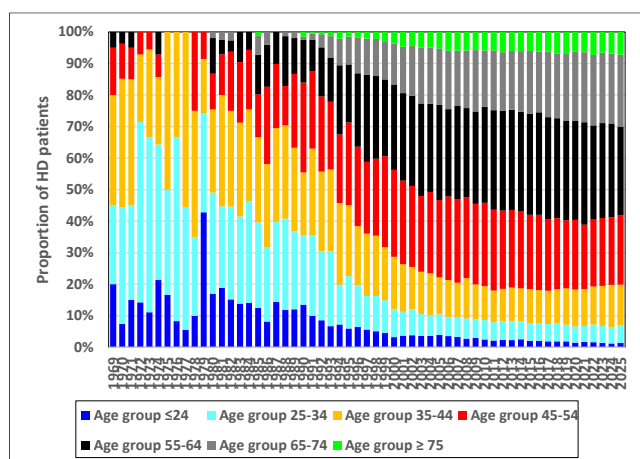
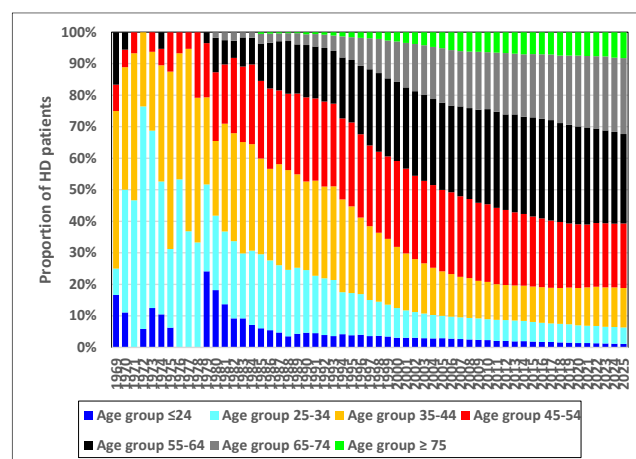
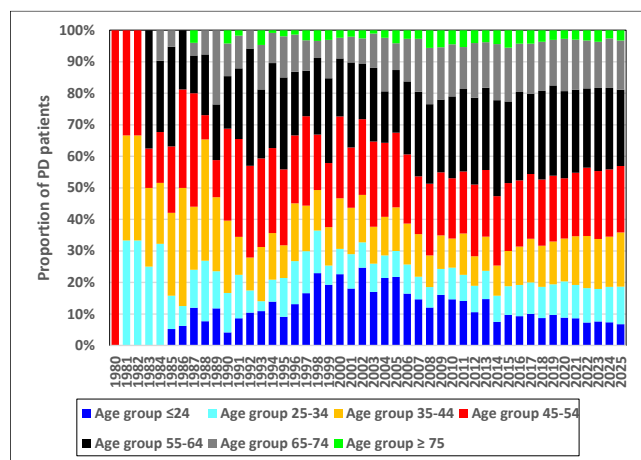
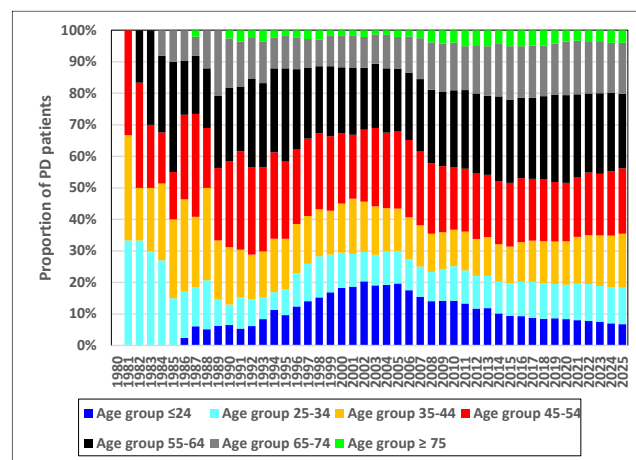
(ii) HD Patients at 31st December

Figure 2.1.4(b) (iii): Age Distribution of PD Patients 1980-2025

(i) New PD Patients

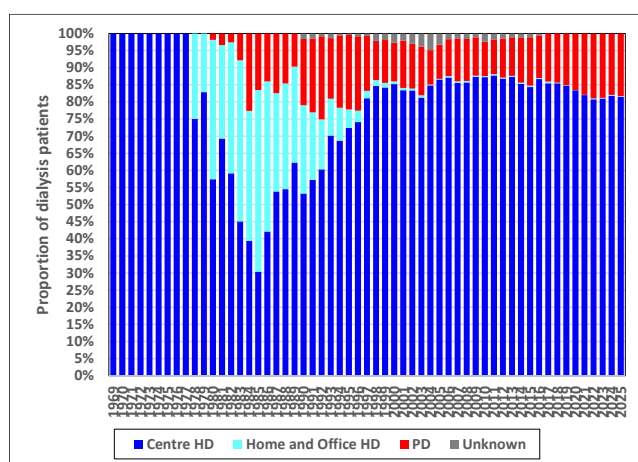
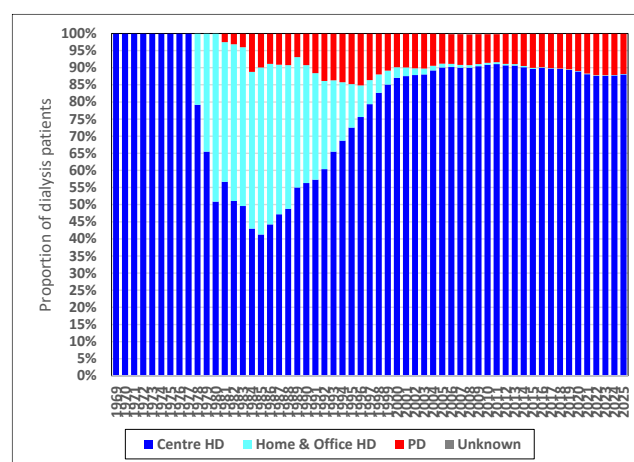
(ii) PD Patients at 31st December

2.1.5: Method and Location of Dialysis

Centre HD continues to dominate over other methods and location of dialysis accounting for 82% and 88% for new and prevalent dialysis patients respectively in 2025. Despite an encouraging trend of an increase in new PD patients for the last 5 years, the prevalent PD patients has remained low (12%). The percentage of incidence patients on home dialysis (both PD and HD) was 18.5% in 2025.

Table 2.1.5: Method and Location of Dialysis Patients 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% Centre HD	81.5	81.8	81.0	80.8	82.0	83.4	84.8	85.5	85.4	86.7
% Home and office HD	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.5	0.3
% PD	18.3	18.0	18.8	19.0	18.0	16.5	15.1	14.4	14.0	12.4
% Unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
ESKD patients at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
% Centre HD	88.1	87.7	87.6	87.6	88.1	88.9	89.4	89.6	89.8	90.0
% Home and office HD	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2
% PD	11.8	12.1	12.2	12.2	11.7	11.0	10.5	10.2	10.1	9.8
% Unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 2.1.5: Method and Location of Dialysis Patients 1969-2025**(i) New Dialysis Patients****(ii) ESKD Patients at 31st December**

2.1.6: Funding for dialysis treatment

The government continued to be the main source of funding for dialysis therapy for new and existing patients in this country. These funds were channelled not only to the government dialysis centres, but also as subsidies to NGO centres and payment of dialysis treatment for public pensioners, civil servants, and their dependents in private centres. Out of pocket payment (self-funding) for new and prevalent dialysis in 2025 were 16.9% and 8.5% respectively. Funding from NGO bodies was 1.7% of new dialysis patients in 2025 (Table & Figure 2.1.6).

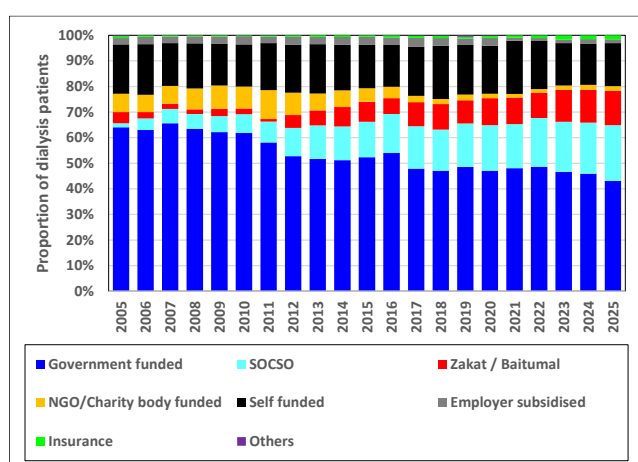
Table 2.1.6: Funding for Dialysis Treatment 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis										
% Government funded	43.1	45.9	46.7	48.6	48.0	47.0	48.5	47.1	47.9	54.0
% SOCSCO	21.8	20.0	19.5	19.1	17.3	17.8	17.0	16.0	16.5	15.3
% Zakat/Baitumal	13.5	12.9	12.5	9.9	10.4	10.5	9.0	10.0	9.4	6.1
% NGO/Charity	1.7	1.9	1.6	1.4	1.4	1.8	2.2	2.0	2.5	4.5
% Self funded	16.9	16.2	16.6	18.8	20.7	18.7	19.4	20.9	19.2	16.3
% Employer subsidised	1.4	1.7	1.4	1.1	1.3	3.1	2.5	2.9	3.6	2.9
% Insurance	1.6	1.5	1.6	1.1	0.8	0.7	0.7	0.8	0.8	0.8
% Others	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.3	0.2	0.0
Dialysing at 31 st December										
% Government funded	48.7	50.5	51.4	52.2	53.4	52.4	53.9	56.0	55.8	56.3
% SOCSCO	27.3	26.1	25.7	25.0	24.0	23.5	22.0	21.7	20.9	19.7
% Zakat/Baitumal	12.0	11.4	11.0	10.5	10.5	10.6	9.9	9.5	9.7	7.5
% NGO/Charity	1.3	1.4	1.1	1.0	1.2	1.3	1.8	2.0	2.3	4.8
% Self funded	8.5	8.3	8.6	9.3	8.9	8.5	8.9	7.3	7.5	8.2
% Employer subsidised	1.3	1.3	1.3	1.4	1.4	3.1	2.8	2.9	3.4	3.1
% Insurance	0.9	0.9	0.8	0.6	0.5	0.5	0.5	0.5	0.4	0.4
% Others	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0

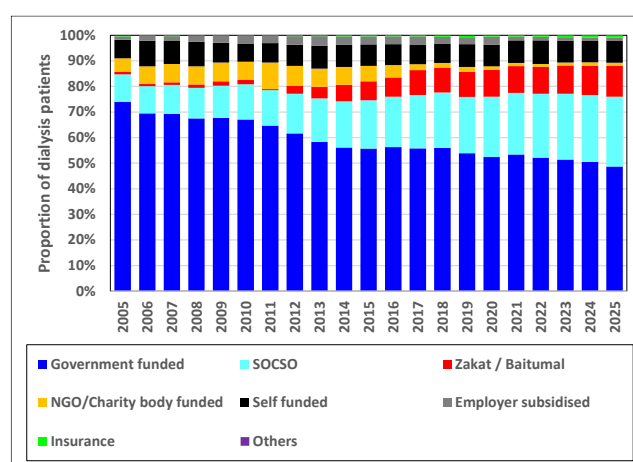
analysis based on available data

Figure 2.1.6: Funding for Dialysis Treatment 2005-2025

(i) New Dialysis Patients



(ii) Dialysis Patients at 31st December



2.1.7: Distribution of dialysis patients by sector

Private centres remained the largest provider of dialysis. Among new patients, 63% were accepted to private dialysis centres followed by government centres (26%) and NGO centres (11%). The proportion of patients dialysing at the private sector has been steadily increasing over the last 30 years, accounting for more than half of prevalent patients since 2018.

Table 2.1.7: Distribution of Dialysis Patients by Sector 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% Public centre	25.7	26.4	27.4	28.7	26.6	26.6	28.1	26.5	28.1	31.2
% NGO centre	11.4	11.1	11.6	11.5	11.7	13.8	14.9	16.1	15.9	16.3
% Private centre	62.9	62.4	61.0	59.8	61.7	59.6	57.0	57.4	56.1	52.6
ESKD patients at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
% Public centre	26.9	28.1	28.6	29.2	29.3	29.5	29.8	29.8	30.1	30.2
% NGO centre	14.9	15.3	15.8	16.4	17.2	18.1	18.8	19.5	20.3	20.8
% Private centre	58.2	56.6	55.7	54.4	53.4	52.5	51.4	50.7	49.7	48.9

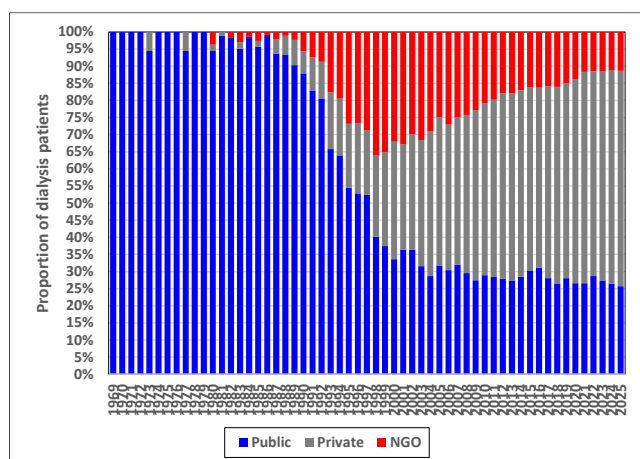
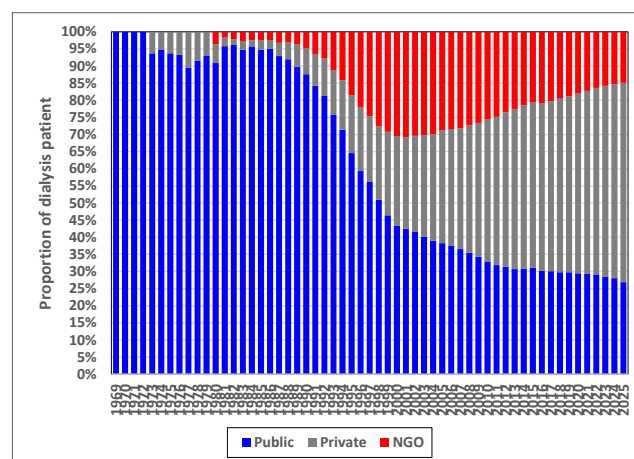
Figure 2.1.7: Distribution of Dialysis Patients by Sector 1969-2025**(i) New Dialysis Patients****(ii) Dialysis Patients at 31st December**

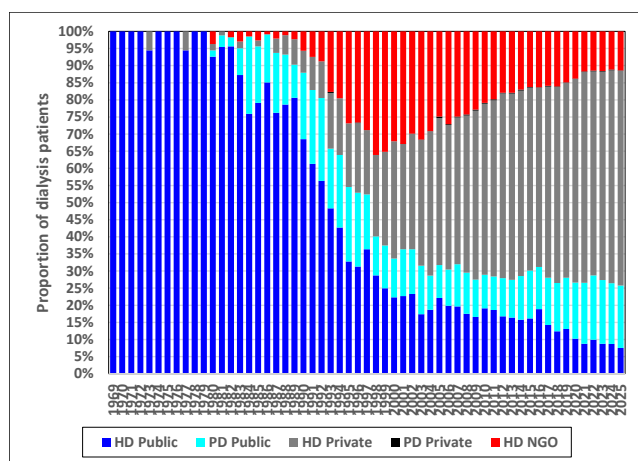
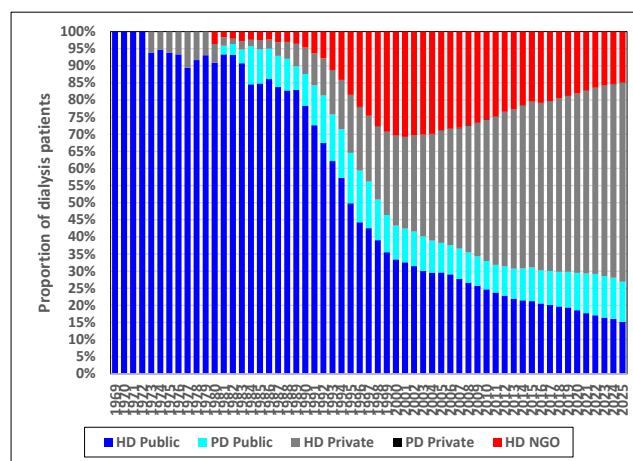
Table 2.1.7(a): Distribution of Dialysis Patients by Modality and Sector 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% Public Centre	25.7	26.4	27.4	28.7	26.6	26.6	28.1	26.5	28.1	31.2
% HD Public Centre	7.5	8.7	8.7	9.9	8.8	10.2	13.1	12.4	14.3	18.9
% PD Public Centre	18.2	17.7	18.6	18.8	17.8	16.4	15.0	14.1	13.8	12.3
% NGO	11.4	11.1	11.6	11.5	11.7	13.8	14.9	16.1	15.9	16.3
% Private Centre	62.9	62.4	61.0	59.8	61.7	59.6	57.0	57.4	56.1	52.6
% HD Private Centre	62.7	62.2	60.9	59.6	61.6	59.5	56.9	57.2	55.8	52.4
% PD Private Centre	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1
ESKD patients at 31 st December	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
% Public Centre	26.9	28.1	28.6	29.2	29.3	29.5	29.8	29.8	30.1	30.2
% HD Public Centre	15.2	16.1	16.4	17.1	17.7	18.6	19.4	19.7	20.1	20.6
% PD Public Centre	11.7	12.0	12.1	12.1	11.6	10.9	10.4	10.1	10.0	9.7
% NGO	14.9	15.3	15.8	16.4	17.2	18.1	18.8	19.5	20.3	20.8
% Private Centre	58.2	56.6	55.7	54.4	53.4	52.5	51.4	50.7	49.7	48.9
% HD Private Centre	58.1	56.5	55.6	54.3	53.4	52.4	51.3	50.6	49.6	48.8
% PD Private Centre	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

PD is almost exclusively provided by the public sector with the private providing only 0.1% of new and prevalent patients. The public sector continued to provide an increasing proportion of PD to new patients accounting for 18.2% in 2025 while the proportion of new HD patients in public HD centres declined to 7.5%. A similar trend is reflected in prevalent patients. (Table 2.1.7 (a) & Figure 2.1.7(a)).

Figure 2.1.7(a): Distribution of Dialysis Patients by Modality and Sector 1969-2025

(i) New Dialysis Patients

(ii) Dialysis Patients at 31st December

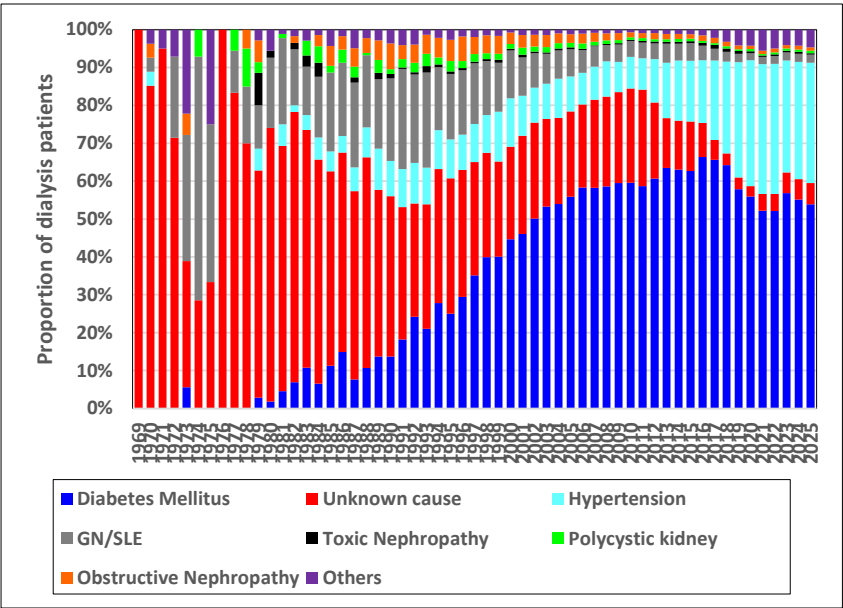
2.1.8: Primary renal disease

Diabetes mellitus remained the main cause of ESKD in new dialysis patients (53.9%) followed by hypertension (31.7%), unknown (5.6%) and glomerulonephritis/SLE (2.2%) (Table & Figure 2.1.8). Although the proportion of diabetes appeared to have declined, this was probably artefactual due to changes in the classification of diabetes as the primary renal disease from 2019. Other reasons include reminders to sites to check their patients' status of diabetes and verification with sites prior to migration to a new kidney transplant allocation system (MyKAS).

Table 2.1.8: Primary Renal Diseases for New Dialysis Patients 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% Unknown cause	5.6	5.4	5.5	4.5	4.4	2.7	3.1	3.1	5.2	9.0
% Diabetes Mellitus	53.9	55.1	56.8	52.1	52.2	56.0	57.9	64.2	65.6	66.4
% GN/SLE	2.2	2.1	2.1	2.1	1.9	1.9	2.2	2.6	3.1	3.8
% Polycystic kidney	0.6	0.5	0.6	0.5	0.4	0.6	0.4	0.6	0.5	0.5
% Obstructive Nephropathy	0.9	1.0	0.9	1.0	0.9	0.9	1.1	1.2	1.4	1.5
% Toxic Nephropathy	0.4	0.5	0.4	0.4	0.4	0.5	0.8	0.9	1.0	0.8
% Hypertension	31.7	31.0	29.5	34.4	34.3	33.3	30.4	24.3	21.0	16.6
% Others	4.7	4.3	4.1	5.0	5.6	4.2	4.1	3.2	2.2	1.5

Figure 2.1.8: Primary Renal Diseases for New Dialysis Patients 1969-2025



SECTION 2.2: GROWTH OF DIALYSIS IN MALAYSIA

2.2.1: Growth in dialysis in Malaysia by sector

The number of dialysis centres (PD and HD Centres combined) for the whole of Malaysia has exceeded 1,000 since 2023. The number of dialysis centres has grown steadily from 812 in 2016 to 1,186 in 2025. The increase in number of dialysis centres was mainly contributed by the private dialysis centres, which grew from 442 in 2016 to 773 in 2025. During the same period, the number of NGO centres only increased from 162 to 171 while the number of public dialysis centres increased from 198 to 239. The number of private dialysis centres predominates in the west coast of Peninsula Malaysia. The number of public PD centres has increased from 40 to 60 from 2016 to 2025 while the number of private PD centres only increased slightly to 14.

Table 2.2.1: Number of Dialysis, HD and PD Centres in Malaysia by Sector, Year 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Dialysis Centres	1186	1120	1055	996	934	880	877	859	833	812
Public Centres	242	238	237	230	228	221	219	210	209	208
NGO Centres	171	167	168	164	161	159	175	167	161	162
Private Centres	773	715	650	602	545	500	483	482	463	442
HD Centres	1112	1047	985	931	875	827	824	807	783	762
Public HD Centres	182	178	178	176	178	175	174	168	169	168
NGO HD Centres	171	167	168	164	161	159	175	167	161	162
Private HD Centres	759	702	639	591	536	493	475	472	453	432
PD Centres	74	73	70	65	59	53	53	52	50	50
Public PD Centres	60	60	59	54	50	46	45	42	40	40
NGO PD Centres	0	0	0	0	0	0	0	0	0	0
Private PD Centres	14	13	11	11	9	7	8	10	10	10

Figure 2.2.1(a): Number of Dialysis Centre in Malaysia by Sector, 1969-2025

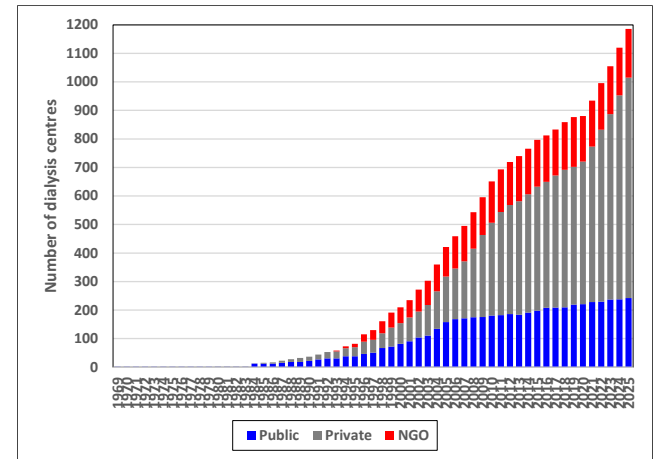
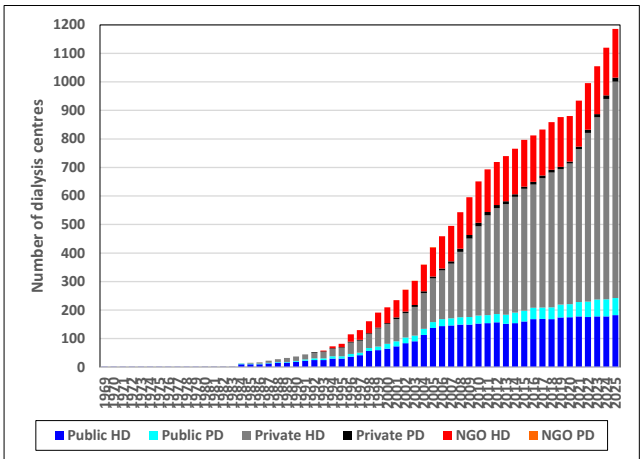


Figure 2.2.1(b): Number of HD and PD Centre in Malaysia by Sector, 1969-2025



The private sector is the largest provider of dialysis for providing HD to 981 pmp while the public sector dominates the PD services with a prevalence rate of 197 pmp. The private sector contributed only 2 pmp of patients on PD.

Table 2.2.2: Prevalence Rate of Dialysis (HD+PD), HD and PD Patients in Malaysia by Sector, 2016-2025

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Dialysis patients, pmp	1684	1649	1636	1597	1552	1554	1460	1382	1329	1284
Public, pmp	453	463	467	466	455	458	435	412	400	388
NGO, pmp	250	252	258	262	267	281	275	270	269	267
Private, pmp	981	934	911	869	829	815	750	701	660	628
HD patients, pmp	1485	1449	1436	1402	1370	1383	1307	1241	1195	1158
Public, pmp	256	265	269	273	275	289	283	272	267	264
NGO, pmp	250	252	258	262	267	281	275	270	269	267
Private, pmp	978	932	909	868	828	814	749	699	658	627
PD patients, pmp	199	200	200	195	182	170	153	141	134	126
Public, pmp	197	198	198	193	180	169	152	140	132	124
NGO, pmp	0	0	0	0	0	0	0	0	0	0
Private, pmp	2	2	2	2	1	1	1	1	1	1

Figure 2.2.2(a): Prevalence Rate of Dialysis Patient (HD+PD) Malaysia by Sector, 1969-2025

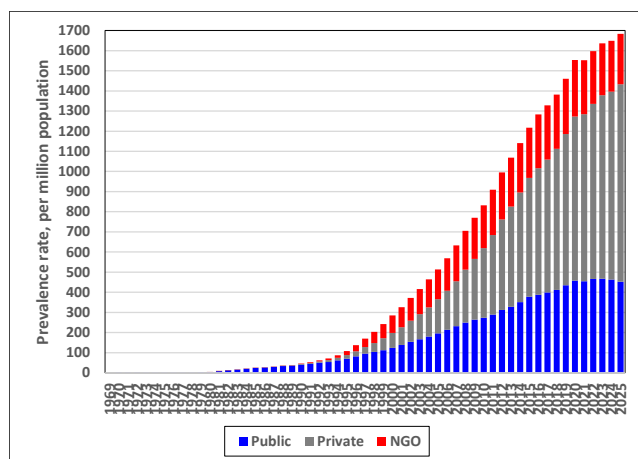
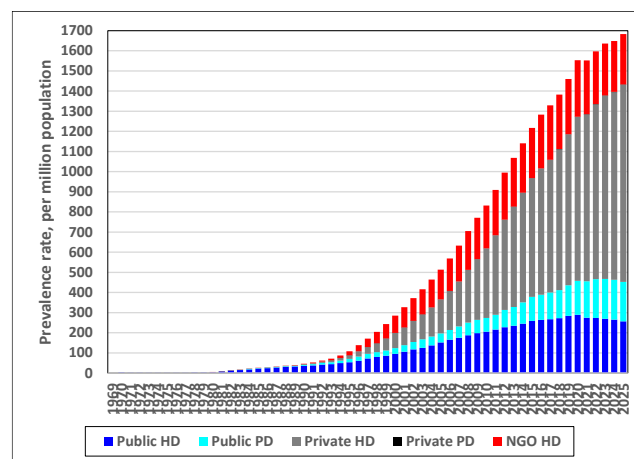


Figure 2.2.2(b): Prevalence Rate of HD and PD Patient in Malaysia by Sector, 1969-2025

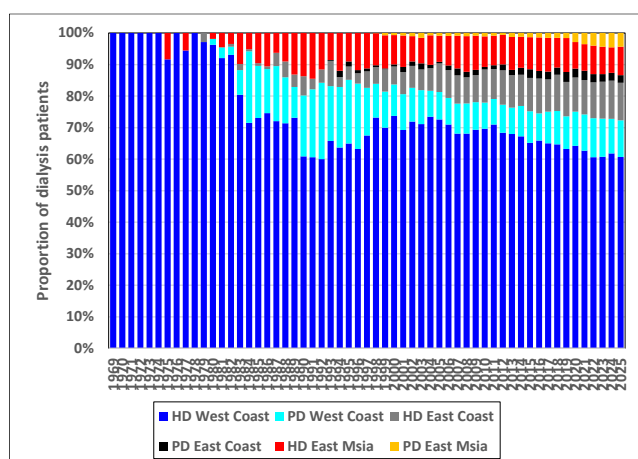
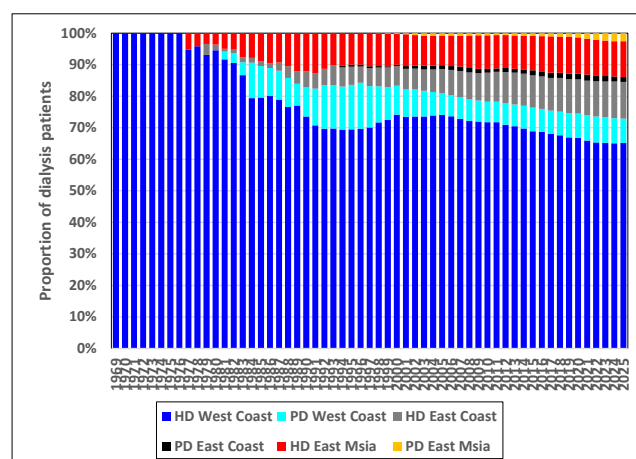


2.2.3: Growth in dialysis in Malaysia by region**Table 2.2.3: Distribution of Dialysis Patients by Modality and Region 2016-2025**

Year	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
New Dialysis patients	9905	10056	10446	10087	9434	9492	9499	8554	8089	8110
% West Coast	72.3	72.8	72.8	73.0	74.2	75.1	73.6	75.3	75.0	74.5
% East Coast	14.3	14.6	14.2	14.0	13.8	13.6	14.0	13.7	12.8	13.4
% East Msia	13.4	12.6	13.0	13.0	12.0	11.3	12.4	11.0	12.2	12.0
New HD patients	8089	8249	8479	8170	7738	7923	8066	7324	6955	7104
% West Coast	74.3	75.3	74.8	74.8	76.4	76.9	74.4	75.5	75.6	75.3
% East Coast	14.6	14.8	14.5	14.0	13.3	13.0	12.9	13.4	12.0	12.6
% East Msia	11.1	9.9	10.7	11.1	10.3	10.1	12.7	11.1	12.4	12.1
New PD patients	1816	1807	1967	1917	1696	1569	1433	1230	1134	1006
% West Coast	63.3	61.0	64.2	65.2	64.2	65.7	68.9	73.9	71.4	69.6
% East Coast	13.1	13.8	12.9	13.9	16.3	16.8	20.5	15.7	17.6	19.4
% East Msia	23.7	25.1	23.0	21.0	19.5	17.5	10.6	10.4	10.9	11.0
Dialysing at 31 st Dec	57638	56149	54662	52221	50559	50412	47498	44758	42550	40603
% West Coast	72.9	73.0	73.4	73.6	73.9	74.5	74.6	75.1	75.5	76.0
% East Coast	13.2	13.2	13.0	13.0	12.9	12.7	12.5	12.3	12.0	11.9
% East Msia	14.0	13.7	13.6	13.4	13.1	12.8	12.9	12.6	12.5	12.2
HD patients at 31 st Dec	50833	49339	47979	45859	44633	44883	42516	40194	38264	36626
% West Coast	73.9	74.0	74.3	74.4	74.6	74.9	74.8	75.3	75.6	76.1
% East Coast	13.2	13.3	12.9	12.7	12.5	12.2	12.1	11.9	11.5	11.4
% East Msia	12.9	12.7	12.8	12.9	12.9	12.9	13.1	12.8	12.8	12.4
PD patients at 31 st Dec	6805	6810	6683	6362	5926	5529	4982	4564	4286	3977
% West Coast	65.4	66.0	66.8	67.5	68.6	70.9	73.1	73.6	73.8	74.3
% East Coast	12.9	13.1	13.8	15.2	16.5	16.6	16.3	15.8	16.2	16.2
% East Msia	21.7	20.9	19.3	17.3	14.9	12.5	10.6	10.6	10.0	9.6

Figure 2.2.3: Distribution of Dialysis Patients by Modality and Region 1969-2025

(i) New Dialysis Patients

(ii) ESKD Patients at 31st December

Most new dialysis patients are from the West Coast comprising 72.3% in 2025. Compared to 2016, there has been a slight increase (about 2%) in proportion of patients from East Coast and East Malaysia. There is an increase in provision of peritoneal dialysis in East Malaysia. The proportion of new PD patients from East Malaysia has more than doubled from 11.0% in 2016 to 23.7% in 2025. This is also reflected in the increase in the proportion of prevalent patients on PD from East Malaysia, increasing from 9.6% in 2016 to 21.7% in 2025. (Table 2.2.3 & Figures 2.2.3 (i) & (ii)).

Table 2.2.4: Number and Prevalence Rate of Dialysis Patients (HD & PD) in Malaysia by State and Sector, 2021-2025

State	Sector	2025		2024		2023		2022		2021	
		n	PMP	n	PMP	n	PMP	n	PMP	n	PMP
Malaysia	Public	15500	453	15763	463	15613	467	15233	466	14830	455
	Private	33566	981	31808	934	30425	911	28427	869	27022	829
	NGO	8572	250	8578	252	8624	258	8561	262	8707	267
	Total	57638	1684	56149	1649	54662	1636	52221	1597	50559	1552
Johor	Public	1320	314	1471	351	1455	354	1387	344	1317	328
	Private	5844	1390	5513	1317	5337	1299	5156	1280	4938	1228
	NGO	1451	345	1489	356	1559	380	1601	397	1670	415
	Total	8615	2049	8473	2024	8351	2033	8144	2022	7925	1971
Kedah	Public	1030	462	1066	481	1107	506	1106	511	1103	513
	Private	2708	1216	2488	1122	2335	1067	2058	951	2048	952
	NGO	377	169	366	165	369	169	382	177	410	191
	Total	4115	1848	3920	1768	3811	1741	3546	1639	3561	1655
Kelantan	Public	943	495	942	499	938	504	922	504	912	503
	Private	1276	669	1155	612	1052	566	890	486	813	449
	NGO	252	132	256	136	246	132	226	123	224	124
	Total	2471	1296	2353	1246	2236	1202	2038	1113	1949	1075
Melaka	Public	448	426	416	397	396	385	388	385	391	389
	Private	1656	1574	1626	1553	1474	1433	1382	1370	1240	1234
	NGO	212	202	218	208	276	268	264	262	266	265
	Total	2316	2202	2260	2158	2146	2087	2034	2017	1897	1889
Negeri Sembilan	Public	725	583	773	623	804	656	780	646	772	641
	Private	1395	1121	1322	1066	1186	968	1084	897	1029	855
	NGO	596	479	550	444	555	453	607	503	623	517
	Total	2716	2183	2645	2133	2545	2078	2471	2046	2424	2013
Pahang	Public	927	553	991	594	971	591	1010	626	994	621
	Private	1541	919	1453	871	1367	832	1205	746	1112	694
	NGO	329	196	315	189	314	191	341	211	348	217
	Total	2797	1668	2759	1654	2652	1614	2556	1583	2454	1532
Perak	Public	1330	517	1313	511	1307	514	1227	488	1204	479
	Private	3378	1312	3199	1245	3299	1298	3323	1322	3212	1277
	NGO	647	251	656	255	666	262	649	258	655	260
	Total	5355	2081	5168	2011	5272	2075	5199	2068	5071	2016

State	Sector	2025		2024		2023		2022		2021	
		n	PMP	n	PMP	n	PMP	n	PMP	n	PMP
Perlis	Public	119	401	122	411	131	447	124	428	100	348
	Private	166	559	165	556	146	498	131	452	132	459
	NGO	51	172	46	155	38	130	39	135	41	143
	Total	336	1131	333	1122	315	1075	294	1014	273	949
Pulau Pinang	Public	422	234	452	251	465	262	465	267	465	267
	Private	2369	1313	2342	1301	2268	1279	2185	1255	2063	1186
	NGO	841	466	868	482	843	476	867	498	922	530
	Total	3632	2013	3662	2034	3576	2017	3517	2020	3450	1983
Sabah	Public	2093	557	2033	543	1958	544	1863	546	1761	516
	Private	682	182	645	172	617	172	597	175	590	173
	NGO	368	98	328	88	305	85	290	85	289	85
	Total	3143	837	3006	803	2880	801	2750	805	2640	774
Sarawak	Public	2034	804	1992	791	1942	776	1840	744	1709	693
	Private	1442	570	1306	519	1238	495	1142	462	1063	431
	NGO	1310	518	1287	511	1272	508	1164	471	1105	448
	Total	4786	1893	4585	1821	4452	1779	4146	1676	3877	1572
Selangor	Public	1949	263	1935	263	1901	264	1891	268	1853	264
	Private	7819	1055	7390	1004	7074	981	6426	911	6055	863
	NGO	1174	158	1180	160	1192	165	1155	164	1189	170
	Total	10942	1477	10505	1427	10167	1410	9472	1343	9097	1297
Terengganu	Public	1036	832	1074	872	1119	925	1157	975	1192	1018
	Private	1015	815	941	764	828	684	758	639	670	572
	NGO	264	212	301	244	284	235	279	235	280	239
	Total	2315	1858	2316	1880	2231	1844	2194	1849	2142	1830
W.P. Labuan	Public	121	1199	116	1151	116	1172	113	1166	115	1198
	Private	0	0	0	0	0	0	0	0	0	0
	NGO	0	0	0	0	0	0	0	0	0	0
	Total	121	1199	116	1151	116	1172	113	1166	115	1198
W.P. Putrajaya	Public	130	1077	116	964	80	673	53	453	40	347
	Private	28	232	29	241	35	295	33	282	33	286
	NGO	0	0	0	0	0	0	0	0	0	0
	Total	158	1309	145	1205	115	968	86	735	73	634
W.P. Kuala Lumpur	Public	873	421	951	460	923	460	907	462	902	459
	Private	2247	1083	2234	1081	2169	1081	2057	1049	2024	1031
	NGO	700	337	718	347	705	351	697	355	685	349
	Total	3820	1841	3903	1888	3797	1893	3661	1867	3611	1839

The private sector is the main provider of dialysis on the West Coast (62%) while the public sector is the main provider in East Malaysia (53%). Private sector overtook the public sector in becoming the main provider of dialysis in the East Coast since 2023, accounting for more than half (50.3%) for the first time in 2025. NGO provided dialysis to 21% of patients in East Malaysia followed by 15% on the West Coast, and 11% on the East Coast (Table 2.2.4).

Among the states with the highest acceptance rate (at least 300 pmp), the private sector provided dialysis to the majority of patients (57%) with the exception of Terengganu where the public sector is the largest sector. However, as the rest of West Malaysia, the proportion contributed by the private sector is increasing. In contrast, public sector is the main provider of dialysis in the states with the lowest acceptance rate. This is exemplified by Sabah where public sector provided dialysis to two-third (67%) of patients with the private and NGO sectors contributing 21% and 11% respectively. This has remained unchanged over the last 5 years.

Data Definition for Diabetes as the Primary Renal Disease

1. Prior to 2017 when data was submitted in paper form, primary and secondary causes of renal disease were allowed. The National Renal Registry (NRR) office adjudicated discrepancies in the data submitted to determine the primary renal disease (PRD).
 - If the PRD was recorded as unknown and patient has diabetes as the secondary cause or diabetes was included as a co-morbidity, the PRD was amended to diabetes.
 - If there was a discrepancy in PRD reported between centres, one as unknown and the other as diabetes, the PRD was amended to diabetes
2. In 2017 data collection migrated to eNRR, an online electronic form. From 2017 and 1st February 2021, the system allowed more than one PRD. The determination of PRD was based on the following algorithm:
 - If both unknown and diabetes were selected as PRD, diabetes was recorded as the PRD
 - If the PRD was recorded as unknown and diabetes was included as a co-morbidity, the PRD was amended to diabetes.
 - If there was a discrepancy in PRD reported between centres, the PRD at first notification was used
 - If multiple PRDs were entered, the order for PRD determination is as follows:
 - 1 ADPKD
 - 2 Hereditary nephritis, specify
 - 3 Glomerulonephritis, specify
 - 4 Obstructive uropathy, specify
 - 5 Drugs / toxic nephropathy
 - 6 Diabetes Mellitus
 - 7 Hypertension
 - 8 Others, specify
 - 9 Unknown
 Examples:
 - If 'Unknown' & 'diabetes' were selected as PRD then PRD is diabetes
 - If 'diabetes' & 'ADPKD' were selected as PRD then PRD is ADPKD
 - If 'Unknown' was selected as PRD and Comorbidities include diabetes then PRD is diabetes
 - If 'Unknown' was selected as PRD and Comorbidities include hypertension then PRD is hypertension
 - Change in PRD is permitted with written request and documentation from the source data providers to NRR
3. From 2nd February 2021 onwards
 - Only a single entry for PRD is permitted
 - If there was a discrepancy in PRD reported between centres, the PRD at first notification was used
 - If PRD is unknown and diabetes is included in comorbidity at notification, "Unknown" PRD is maintained
 - Change in PRD is permitted with written request and documentation from the source data providers to NRR