

CHAPTER 6

BLOOD PRESSURE CONTROL AND DYSLIPIDAEMIA IN PATIENTS ON DIALYSIS

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SECTION 6.1: BLOOD PRESSURE CONTROL ON DIALYSIS

The control of pre dialysis systolic blood pressure (SBP) in haemodialysis (HD) patients has not improved over the last decade, with only 20% of HD patients achieving SBP < 140 mmHg (Table 6.1.1) in 2023. The mean and median pre dialysis SBP in HD patients in 2023 were at a relatively high figure of 154.2 mmHg and 154.5 respectively but finally shows a downward trend from 2022 where they were 154.6 and 155 respectively. Pre dialysis diastolic blood pressure (DBP) in HD patients was better controlled than pre dialysis SBP in 2023, with 85% of such patients achieving pre dialysis DBP < 90 mmHg (Table 6.1.2). The mean and median pre dialysis DBP in HD patients were satisfactory at 78.9 mmHg and 78.6 mmHg respectively in 2023. Over the past decade, the mean pre dialysis DBP in HD patients has remained the same since 2014.

The fact that SBP is less well controlled compared to DBP is not unexpected given that most patients on dialysis are in the older age group and that the prevalence of systolic hypertension rises with increasing age above 50 years. In addition, DBP may fall with increasing arterial stiffness seen in aging, hypertension, diabetes mellitus and chronic kidney disease, as well as in patients with left ventricular diastolic dysfunction.

Table 6.1.1: Distribution of pre dialysis systolic blood pressure, HD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% Patients <120 mmHg	% Patients 120- <140 mmHg	% Patients 140- <160 mmHg	% Patients 160- <180 mmHg	% Patients ≥180 mmHg
2023	52754	154.2	17.4	154.5	142.8	166.1	3	17	42	31	7
2022	50393	154.6	17.5	155	143.3	166.6	3	17	42	32	7
2021	49800	154	17.7	154.4	142.4	166	3	18	42	31	7
2020	47819	154.1	17.8	154.4	142.6	166.1	3	18	42	30	7
2019	44759	153.7	18.2	153.9	142	165.8	4	18	42	29	7
2018	41689	153.5	18.3	153.7	141.7	165.7	4	18	42	29	7
2017	40172	153.6	18.9	153.7	141.2	166	4	19	41	29	8
2016	36444	152.2	18.3	152.3	140.1	164.3	4	21	42	27	6
2015	33874	152.4	18.5	152.4	140.1	164.6	4	21	42	27	7
2014	31299	152.1	18.6	152	139.8	164.5	4	21	42	27	7

Figure 6.1.1: Cumulative distribution of pre dialysis systolic blood pressure, HD patients 2014-2023

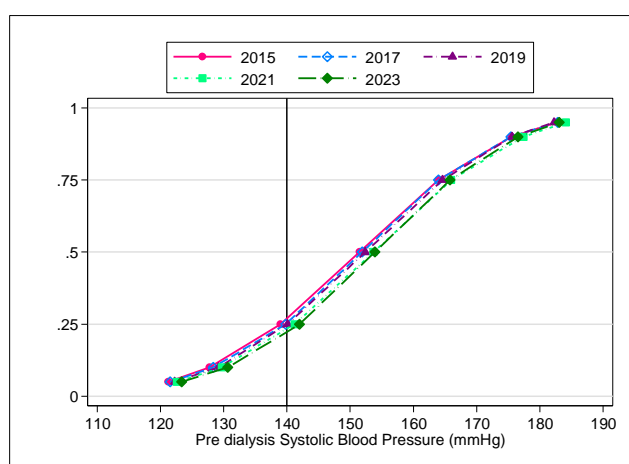


Figure 6.1.2: Cumulative distribution of pre dialysis diastolic blood pressure, HD patients 2014-2023

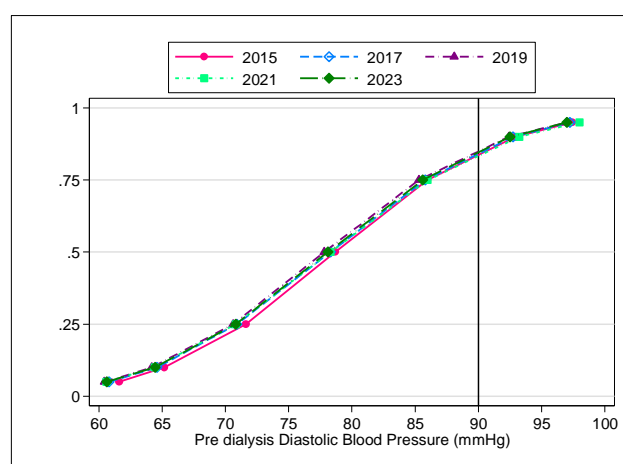


Table 6.1.2: Distribution of pre dialysis diastolic blood pressure, HD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% Patients <70 mmHg	% Patients 70-<80 mmHg	% Patients 80-<90 mmHg	% Patients 90-<100 mmHg	% Patients ≥100 mmHg
2023	52755	78.9	10.9	78.6	71.6	85.9	20	35	30	12	3
2022	50393	78.8	10.9	78.5	71.4	85.8	21	35	30	12	3
2021	49800	78.4	10.9	78.1	71.1	85.3	22	35	29	11	3
2020	47819	78.4	11	78.2	71	85.5	22	35	29	12	3
2019	44759	78.3	11.2	78.1	70.8	85.6	22	34	29	11	3
2018	41688	78.3	11.2	78	70.8	85.6	23	34	29	11	3
2017	40170	78.7	11.7	78.3	70.8	86	22	33	29	12	4
2016	36430	78.3	11.6	77.8	70.6	85.3	23	34	28	11	3
2015	33870	78.2	11.6	77.8	70.6	85.3	23	34	28	11	3
2014	31296	78.2	11.6	77.8	70.5	85.2	23	34	28	11	3

In contrast to HD patients, pre dialysis SBP in PD patients has been better controlled consistently over the last decade. In 2023, 37% of PD patients versus 20% of HD patients had a pre dialysis SBP < 140 mmHg (Table 6.1.3). The mean and median pre dialysis SBP in PD patients were lower than HD patients at 145.2 mmHg and 145.3 mmHg respectively. However, the mean pre dialysis SBP in PD patients over the past 10 years has increased from 143.9 mmHg in 2014 to 145.2 mmHg in 2023 as provision of PD has become less selective, as illustrated in Table 6.1.3. In 2023 pre dialysis DBP is well controlled in PD patients with 84% of these patients achieving pre dialysis DBP < 90 mmHg (Table 6.1.4), together with a mean DBP of 81.7 and median DBP of 81.9 mmHg.

Table 6.1.3: Distribution of pre dialysis systolic blood pressure, PD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% Patients <120 mmHg	% Patients 120-<140 mmHg	% Patients 140-<160 mmHg	% Patients 160-<180 mmHg	% Patients ≥180 mmHg
2023	7317	145.2	17.2	145.3	134.5	156.2	7	30	44	17	2
2022	7048	145.1	17.1	145.1	134	156	7	31	44	16	2
2021	6695	145.1	17.7	145.3	133.4	156.8	8	30	43	17	2
2020	6138	145.8	17.7	146.4	134.3	157.6	7	29	43	18	3
2019	5534	145.7	18.7	146.2	133.2	158.2	8	28	42	19	3
2018	5080	146.3	18.3	147	134.3	158.6	8	27	43	20	2
2017	4755	145.5	18.5	145.4	133.1	158.1	8	30	40	19	3
2016	4281	144.4	18.7	144.6	132	156.7	10	30	39	18	3
2015	3965	143.6	17.9	143.6	132	155.6	9	31	42	15	3
2014	3482	143.9	18.6	144.2	131.5	156.9	10	31	40	17	2

Figure 6.1.3: Cumulative distribution of pre dialysis systolic blood pressure, PD patients 2014-2023

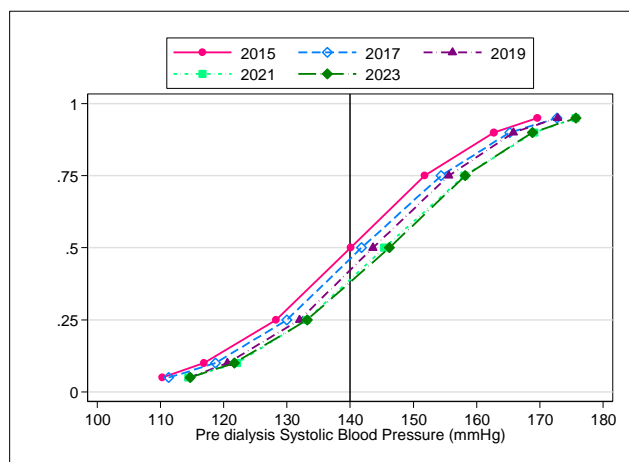


Figure 6.1.4: Cumulative Distribution of pre dialysis diastolic blood pressure, PD patients 2014-2023

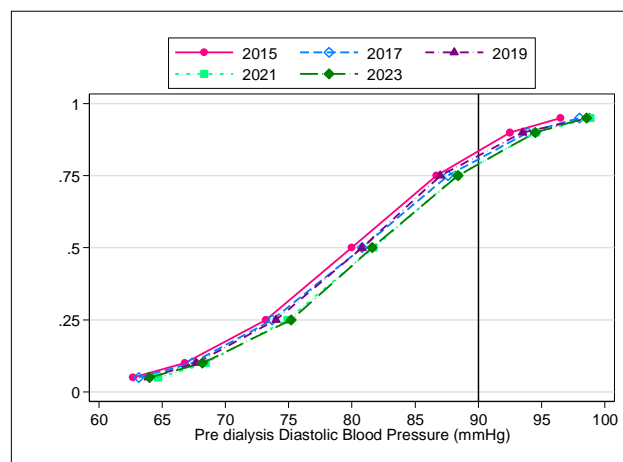


Table 6.1.4: Distribution of pre dialysis diastolic blood pressure, PD patients 2014-2023

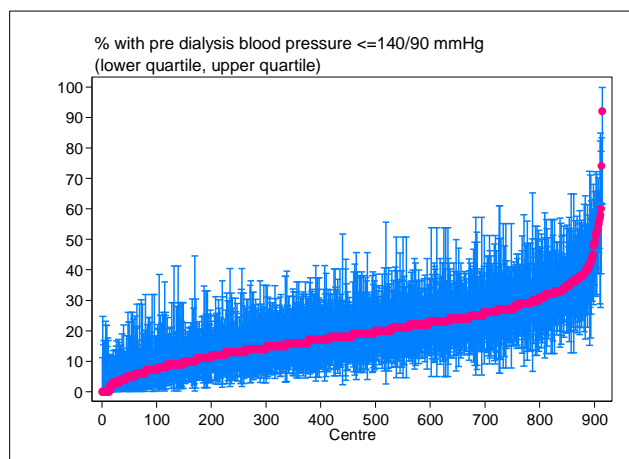
Year	Number of patients	Mean	SD	Median	LQ	UQ	% Patients <70 mmHg	% Patients 70-<80 mmHg	% Patients 80-<90 mmHg	% Patients 90-<100 mmHg	% Patients ≥100 mmHg
2023	7318	81.7	9.5	81.9	76.1	87.6	10	31	43	14	2
2022	7048	81.7	9.5	82.2	76.1	87.6	11	30	43	14	2
2021	6695	81.3	9.8	81.5	75.4	87.4	12	31	40	14	3
2020	6138	81.4	9.6	81.6	75.6	87.4	11	31	41	14	3
2019	5534	81.7	10.6	81.6	75.2	88.4	13	31	36	17	3
2018	5080	81.6	10.6	81.7	75.1	88.2	12	30	38	16	4
2017	4755	81.7	10.6	81.7	74.9	88.3	13	30	37	16	4
2016	4271	81.1	11.1	80.8	74.1	87.8	14	33	34	14	5
2015	3953	80.8	10.6	80.8	74	87	14	33	36	13	4
2014	3467	81	11.5	80.9	74	87.4	15	32	35	14	4

Overall, there is a wide inter-centre variation amongst haemodialysis centres in 2023 in terms of the proportion of patients achieving pre dialysis BP < 140/90 (Table & Figure 6.1.5a).

Table 6.1.5(a): Proportion of HD patients with pre dialysis blood pressure ≤140/90 mmHg, HD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	914	0	5	13	18.5	25	37	92
2022	857	0	4	12	18	25	38	91
2021	818	0	4	13	19	26	38	59
2020	782	0	6	13	19	26	40	81
2019	757	0	6	14	20	27	41	100
2018	736	0	6	14	20	28	41	92
2017	722	0	7	15	21	28	41	94
2016	695	0	8	16	23	30	45	92
2015	671	0	8	15	22	30	44	87
2014	644	0	7	17	23	32	46	93

Figure 6.1.5(a): Variation in proportion of HD patients with pre dialysis blood pressure $\leq 140/90$ mmHg, HD centres 2023



There is significant inter-centre variation in both median SBP and DBP in HD patients in 2023 (Figures 6.1.5 b and c). In 2023, the difference between the HD centres with the 5th percentile and 95th percentile median BP was 21.2 mmHg for SBP (Table 6.1.5b) and 15.5 mmHg for DBP (Table 6.1.5c) respectively.

Table 6.1.5(b): Median systolic blood pressure among HD patients, HD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	914	117.9	144.4	150.8	154.7	159	165.6	177.7
2022	857	125.7	144.3	151.2	155.3	159.8	167.1	182.1
2021	818	133.4	144.2	150.3	154.3	158.8	165.5	178.7
2020	782	131.9	144.1	150.6	154.4	158.8	164.7	177.5
2019	757	122	144	149.9	154.3	158.3	164.9	178.5
2018	736	103.5	144.4	150	154.1	158.4	165.1	177.6
2017	722	109.1	143.9	149.9	153.8	158.3	165.6	185
2016	696	119.4	141.7	148.3	152.6	157	163.4	171.1
2015	671	120.4	141.7	148.6	152.9	157.5	164.6	174.5
2014	644	117.8	141.1	147.9	152.2	157.2	164.3	172.7

Figure 6.1.5(b): Variation in median systolic blood pressure among HD patients, HD centres 2023

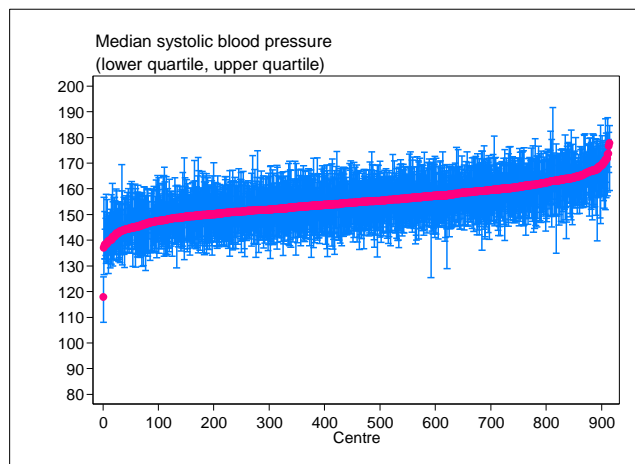


Figure 6.1.5(c): Variation in median diastolic blood pressure among HD patients, HD centres 2023

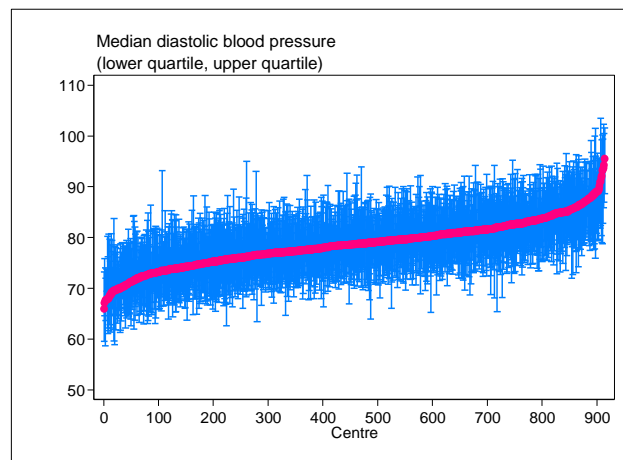


Table 6.1.5(c): Median diastolic blood pressure among HD patients, HD centres 2014-2023

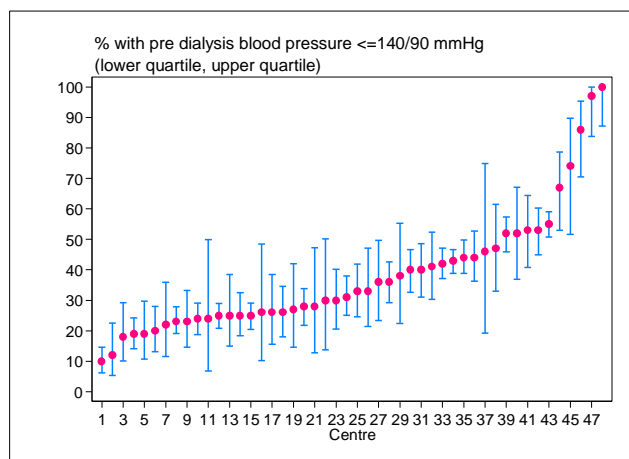
Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	914	65.9	71	75.8	78.7	81.5	86.5	95.5
2022	857	64.4	71.2	75.7	79	81.9	86.1	97.9
2021	818	64.4	70.5	75.3	78.4	81.4	86.1	97.3
2020	782	62.7	70.5	75.3	78.4	81.3	85.8	94.8
2019	757	61.9	70.8	75.2	78.4	81.1	85.5	93.5
2018	736	62.8	70.4	75.2	78.3	81	85.5	101.1
2017	722	65	70.9	75.3	78.4	81.4	86.6	132
2016	695	63.8	71	75	77.9	81.1	85.5	127.1
2015	671	64.9	70.6	75	78	81	85.6	94.2
2014	644	64.7	70.5	74.8	77.8	81	85.4	120.6

Similar to haemodialysis centres, there was also a wide variation amongst PD centres in the proportion of patients achieving BP < 140/90 in 2022 (Table & Figure 6.1.6a).

Table 6.1.6(a): Proportion of PD patients with pre dialysis blood pressure \leq 140/90 mmHg, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	48	10	18	25	32	45	86	100
2022	47	3	16	26	35	43	100	100
2021	46	3	21	28	33	45	89	97
2020	43	14	22	25	36	50	94	100
2019	39	7	19	24	37	42	94	96
2018	38	6	14	25	33	39	92	100
2017	36	10	11	28	36.5	45.5	91	100
2016	37	19	19	32	40	48	100	100
2015	35	24	28	33	40	47	98	100
2014	31	9	20	30	37	50	97	100

Figure 6.1.6(a): Variation in proportion of PD patients with pre dialysis blood pressure $\leq 140/90$ mmHg, PD centres 2023



The difference between the PD centres with the 5th percentile and 95th percentile median BP was 42.9 mmHg for SBP in 2023 (Table 6.1.6b). There was also significant inter-centre variation in median DBP in PD patients in 2023 of 12.9mmHg (Table & Figure 6.1.6c).

Table 6.1.6(b): Median systolic blood pressure among PD patients, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	48	106.5	114.7	140.5	144.8	150.1	157.6	159.9
2022	47	107.3	113.3	141	145.5	150.3	154	158.6
2021	46	108.3	114.6	141.2	146.5	149.1	155.2	157.1
2020	43	109.3	114.7	139.4	146.3	150.4	153.5	157.6
2019	39	115.5	116.5	140.7	145.9	150.6	157	161
2018	38	112.7	116.5	143.3	146.1	150	155.2	158
2017	36	117.3	118.6	140.3	144.9	149.2	158.1	160
2016	37	111.9	116.6	139	143.3	148	152.3	161
2015	35	114.6	115	138.4	142.6	145.5	150.5	153.3
2014	31	114.8	115.2	138.4	145	147.3	154.2	158.4

Figure 6.1.6(b): Variation in median systolic blood pressure among PD patients, PD centres 2023

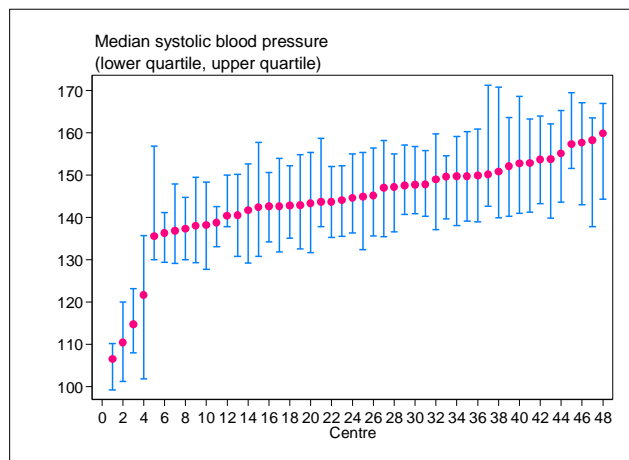


Figure 6.1.6(c): Variation in median diastolic blood pressure among PD patients, PD centres 2023

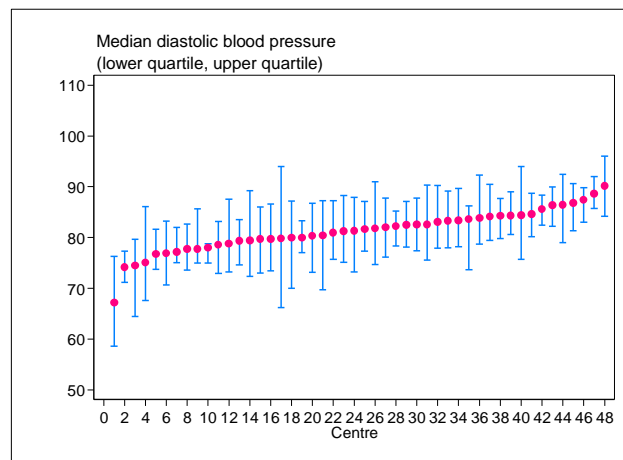


Table 6.1.6(c): Median diastolic blood pressure among PD patients, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	48	67.2	74.5	79.1	81.5	83.9	87.4	90.2
2022	47	68.9	70.1	80	81.8	84	86.6	91
2021	46	67	75.1	78.2	81.6	83.5	87.9	90
2020	43	68.3	74.7	79.8	81.3	84	85.8	86.2
2019	39	70	74.5	78.9	81.9	83.8	87.1	87.3
2018	38	65.9	71.6	79.2	82.8	83.9	87.2	87.5
2017	36	72.5	74.3	80	81.5	84.6	87.7	88
2016	37	72.8	73.7	79.5	81.1	83	86.9	87.5
2015	35	70.5	73.1	78.7	81.9	84.1	89.5	94.1
2014	31	73.8	75	79.4	81	83.9	89.9	92.3

SECTION 6.2: DYSLIPIDAEMIA IN DIALYSIS PATIENTS

Individuals with end stage kidney disease (ESKD) are at high risk for cardiovascular (CV) morbidity and mortality. Cardiovascular disease (CVD) is the most common cause of death in dialysis patients. Hence, they should be screened for the traditional CV risk factors and treated appropriately. However, patients on dialysis have not had similar benefits of lipid lowering therapy as compared to patients with earlier stages of CKD and the general population

In 2023, 67% of HD patients achieved the moderate CV risk target of an LDL cholesterol < 2.6 mmol/L. This was 59% 10 years ago in 2014 (Table 6.2.1). The percentage of patients achieving a high CV risk target of LDL cholesterol <1.8mmol/L in 2023 was 30% compared to only 21% in 2014. Median LDL Cholesterol levels also improved from 2.4mmol/L in 2014 to 2.2mmol/L in 2023. This improvement with more widespread use and availability of moderate to high intensity statins.

Table 6.2.1: Distribution of LDL cholesterol, HD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% patients <1.8 mmol/L	% patients 1.8-<2.6 mmol/L	% patients ≥2.6 mmol/L
2023	50079	2.3	0.9	2.2	1.7	2.8	30	37	33
2022	47685	2.4	0.9	2.3	1.7	2.9	29	37	34
2021	46912	2.4	0.9	2.3	1.7	2.9	29	36	35
2020	45280	2.4	0.9	2.3	1.8	2.9	27	37	36
2019	41486	2.4	0.9	2.3	1.8	2.9	26	37	37
2018	38359	2.4	0.9	2.3	1.8	2.9	26	37	37
2017	36685	2.5	0.9	2.3	1.8	3	24	37	39
2016	32756	2.5	0.9	2.4	1.9	3	23	38	39
2015	30478	2.5	0.9	2.4	1.9	3	23	38	39
2014	27756	2.5	0.9	2.4	1.9	3	21	38	41

61% of PD patients achieved the moderate CV risk target of a LDL Cholesterol of <2.6mmol/L in 2023 compared to 46% a decade earlier in 2014. The percentage of patients achieving a high CV risk target of LDL Cholesterol <1.8mmol/L was 21% compared to only 15% in 2014. Again, this improvement could be due to the same medication factors as for HD patients.

Table 6.2.2: Distribution of LDL cholesterol, PD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% patients <1.8 mmol/L	% patients 1.8-<2.6 mmol/L	% patients ≥2.6 mmol/L
2023	6816	2.7	1.1	2.6	1.9	3.4	21	30	49
2022	6376	2.8	1.1	2.6	2	3.4	19	31	50
2021	6246	2.7	1.2	2.6	1.9	3.4	21	30	49
2020	5834	2.8	1.2	2.6	2	3.5	20	30	50
2019	5215	2.8	1.2	2.6	2	3.4	20	30	50
2018	4940	2.8	1.1	2.6	2	3.4	19	31	51
2017	4313	2.8	1.1	2.6	2	3.4	19	31	50
2016	4151	2.8	1.1	2.7	2	3.4	17	30	53
2015	3890	2.8	1.1	2.7	2.1	3.4	16	31	53
2014	3348	2.9	1.1	2.7	2.1	3.5	15	31	54

With regards to triglyceride levels, 85% of HD patients had triglyceride levels of <2.3 mmol/L in 2023 (Table 6.2.3). The mean and median serum triglyceride in HD patients in 2023 were 1.6 mmol/L and 1.3 mmol/L, showing an improvement from 1.8 and 1.5 mmol/L respectively a decade ago.

Table 6.2.3: Distribution of serum triglyceride, HD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% patients <1.7 mmol/L	% patients 1.7-<2.3 mmol/L	% patients 2.3-<3.5 mmol/L	% patients ≥3.5 mmol/L
2023	50340	1.6	0.9	1.3	1	1.9	68	17	11	4
2022	47918	1.6	0.9	1.4	1	1.9	67	18	11	4
2021	47132	1.6	1	1.4	1	2	65	18	12	5
2020	45726	1.6	1	1.4	1	2	65	18	12	5
2019	42275	1.7	1	1.4	1	2	63	19	13	5
2018	39593	1.7	1	1.5	1.1	2.1	61	19	14	6
2017	37797	1.8	1.1	1.5	1.1	2.2	59	19	15	7
2016	33782	1.8	1.1	1.5	1.1	2.2	57	20	15	8
2015	31292	1.8	1.1	1.5	1.1	2.2	58	20	15	7
2014	28802	1.8	1.1	1.5	1.1	2.2	58	19	15	8

Figure 6.2.3: Cumulative distribution of serum triglyceride, HD patients 2014-2023

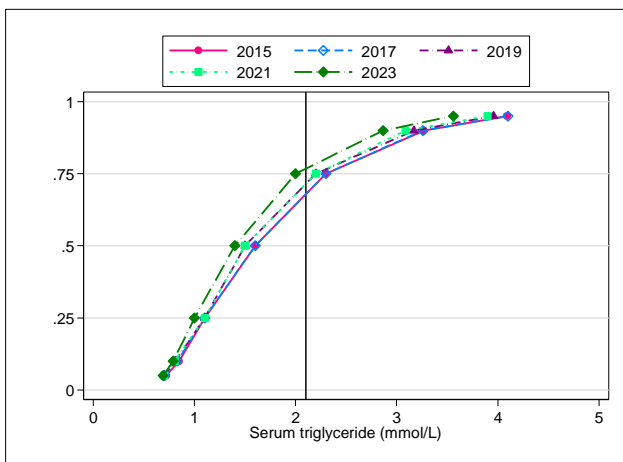
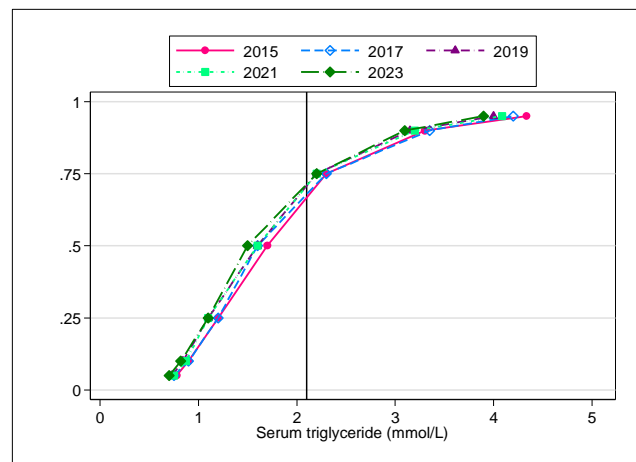


Figure 6.2.4: Cumulative distribution of serum triglyceride, PD patients 2014-2023



80% of Peritoneal dialysis patients had a triglyceride level of < 2.3 mmol/L in 2023 (Table 6.2.4). The mean and median serum triglyceride levels in PD patients have decreased over the past 10 years from 1.9 mmol/L and 1.6 mmol/L in 2014 to 1.8 mmol/L and 1.5 mmol/L in 2023 respectively.

Table 6.2.4: Distribution of serum triglyceride, PD patients 2014-2023

Year	Number of patients	Mean	SD	Median	LQ	UQ	% patients <1.7 mmol/L	% patients 1.7-<2.3 mmol/L	% patients 2.3-<3.5 mmol/L	% patients ≥3.5 mmol/L
2023	6968	1.8	1.1	1.5	1.1	2.1	61	19	14	6
2022	6573	1.8	1.1	1.5	1.1	2.2	59	20	15	6
2021	6384	1.8	1.1	1.5	1.1	2.2	59	20	15	6
2020	5907	1.8	1.1	1.5	1.1	2.2	58	20	15	7
2019	5373	1.8	1.1	1.5	1.1	2.2	58	20	14	8
2018	5026	1.8	1.1	1.5	1.1	2.2	58	20	15	7
2017	4344	1.9	1.2	1.6	1.1	2.2	55	22	15	8
2016	4192	1.9	1.2	1.6	1.2	2.3	52	22	17	9
2015	3925	1.9	1.1	1.6	1.1	2.2	55	21	16	8
2014	3352	1.9	1.1	1.6	1.1	2.3	55	21	15	9

Overall, the median LDL Cholesterol levels has dropped from 2.5 in 2014 to 2.3 in 2023 (Table 6.2.5a). There was slight inter-centre variation in median LDL cholesterol levels and the proportion of HD patients with LDL cholesterol < 2.6mmol/L varied by 15% between the LQ and UQ in HD centres in 2023 although this variation has been stable over the past decade (Table 6.2.5b)

Table 6.2.5(a): Median LDL cholesterol level among HD patients, HD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	887	1.4	1.8	2.1	2.3	2.4	2.7	3.8
2022	826	1.5	1.9	2.1	2.3	2.5	2.7	3.8
2021	791	1.3	1.8	2.1	2.3	2.4	2.7	3.6
2020	758	1.6	1.9	2.1	2.3	2.5	2.8	3.9
2019	729	1.4	1.9	2.1	2.3	2.5	2.8	3.8
2018	704	1.6	1.9	2.1	2.3	2.5	2.8	4
2017	683	1.7	2	2.2	2.4	2.5	2.9	4.5
2016	660	1.4	2	2.2	2.4	2.6	2.8	4.1
2015	643	1.1	2	2.3	2.4	2.6	2.9	4.2
2014	599	1.6	2	2.3	2.5	2.6	2.9	3.7

Figure 6.2.5(a): Variation in median LDL cholesterol level among HD patients, HD centres 2023

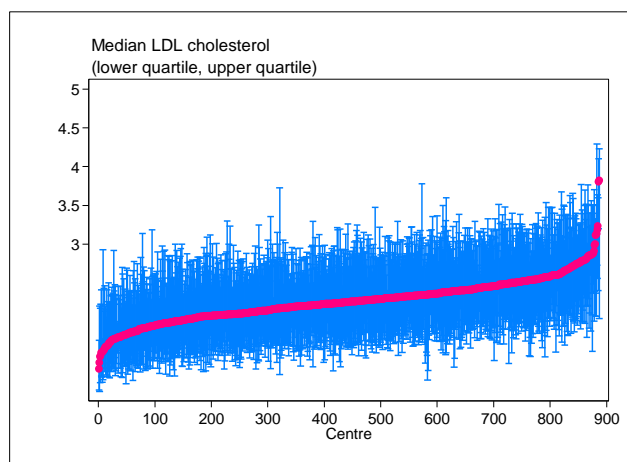


Figure 6.2.5(b): Variation in proportion of patients with LDL cholesterol <2.6 mmol/L, HD centres 2023

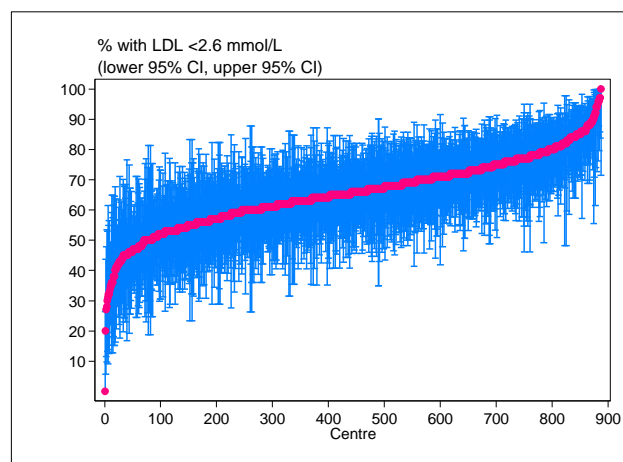


Table 6.2.5(b): Proportion of HD patients with LDL cholesterol <2.6 mmol/L, HD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	887	0	46	58	66	73	85	100
2022	826	13	44	57	65	73	83	97
2021	791	15	44	57	65	73	82	95
2020	758	0	41	56	63	71	82	100
2019	729	10	40	56	64	71	82	95
2018	704	4	40	53	64	72	82	100
2017	683	0	40	53	62	69	79	94
2016	660	5	40	51	60	68.5	78.5	100
2015	643	0	39	52	59	68	79	92
2014	599	14	37	50	58	67	79	92

For median serum triglyceride levels amongst HD centres, the difference between the 5th percentile and 95th percentile was only 0.5 mmol/L (Table & Figure 6.2.5c). There is a 10% difference between the LQ and UQ in terms of the proportion of patients with serum triglyceride < 2.1 mmol/L in HD centres in 2023. This is relatively unchanged from a decade ago (Table & Figure 6.2.5d).

Table 6.2.5(c): Median serum triglyceride level among HD patients, HD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	900	0.9	1.1	1.2	1.3	1.5	1.6	2.5
2022	839	0.8	1.1	1.2	1.4	1.5	1.7	2.3
2021	798	0.9	1.1	1.3	1.4	1.5	1.8	2.1
2020	768	0.9	1.1	1.3	1.4	1.5	1.7	2.5
2019	735	0.9	1.1	1.3	1.4	1.6	1.8	3.5
2018	720	0.9	1.1	1.3	1.5	1.6	1.8	2.5
2017	698	0.9	1.2	1.4	1.5	1.7	2	2.9
2016	674	0.9	1.2	1.4	1.5	1.7	2	2.7
2015	652	1	1.2	1.4	1.5	1.7	1.9	2.5
2014	619	1	1.2	1.4	1.5	1.7	2	2.5

Figure 6.2.5(c): Variation in median serum triglyceride level among HD patients, HD centres 2023

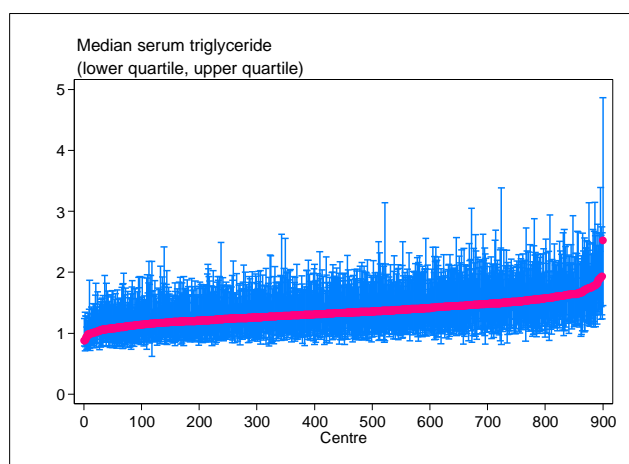


Figure 6.2.5(d): Variation in proportion of patients with serum triglyceride <2.1 mmol/L, HD centres 2023

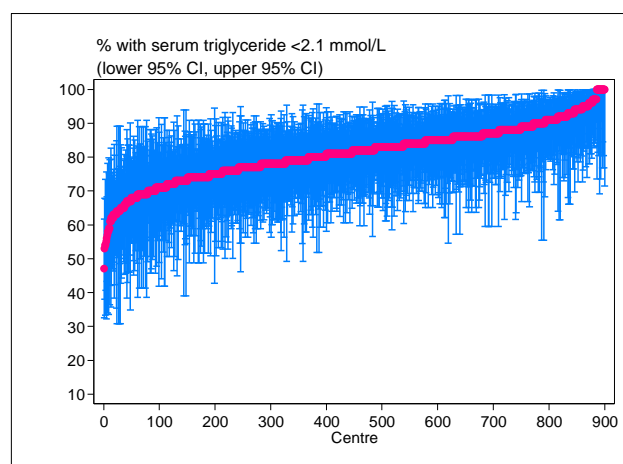


Table 6.2.5(d): Proportion of HD patients with serum triglyceride <2.1 mmol/L, HD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	900	47	67	76	82	86	94	100
2022	839	40	67	76	81	86	93	100
2021	798	50	63	73	79	85	93	100
2020	768	33	64	74	79	85	92	100
2019	735	26	62	71	78	84	91	100
2018	720	42	60.5	70	76	82	90	100
2017	698	0	55	67	74	80	89	100
2016	674	36	54	65	72	79	88	100
2015	652	39	56	66	72	80	89	100
2014	619	36	53	65	73	80	89	100

There was some inter-centre variation in median LDL cholesterol levels among PD patients in 2023 with the difference between the 5th percentile and 95th percentile being 0.9 mmol/L (Table & Figure 6.2.6a). There is a 16% difference between the LQ and UQ of the proportion of patients with serum LDL cholesterol < 2.6mmol/L (Figure 6.2.6b). This was 13% a decade ago and therefore relatively unchanged.

Table 6.2.6(a): Median serum LDL level among PD patients, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	887	1.4	1.8	2.1	2.3	2.4	2.7	3.8
2022	826	1.5	1.9	2.1	2.3	2.5	2.7	3.8
2021	791	1.3	1.8	2.1	2.3	2.4	2.7	3.6
2020	758	1.6	1.9	2.1	2.3	2.5	2.8	3.9
2019	729	1.4	1.9	2.1	2.3	2.5	2.8	3.8
2018	704	1.6	1.9	2.1	2.3	2.5	2.8	4
2017	683	1.7	2	2.2	2.4	2.5	2.9	4.5
2016	660	1.4	2	2.2	2.4	2.6	2.8	4.1
2015	643	1.1	2	2.3	2.4	2.6	2.9	4.2
2014	599	1.6	2	2.3	2.5	2.6	2.9	3.7

Figure 6.2.6(a): Variation in median LDL cholesterol level among PD patients, PD centres 2023

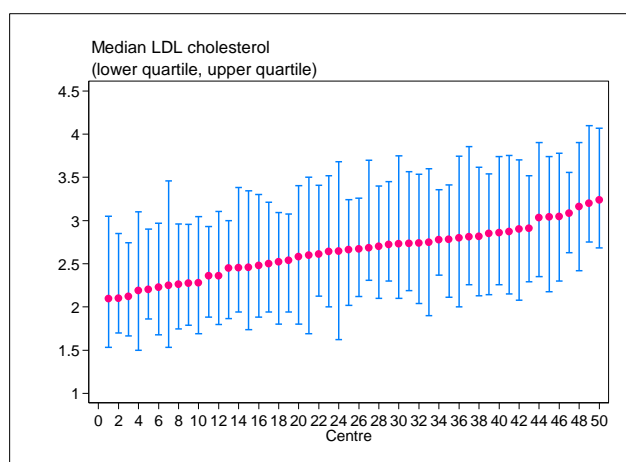


Figure 6.2.6(b): Variation in proportion of patients with LDL cholesterol <2.6 mmol/L, PD centres 2023

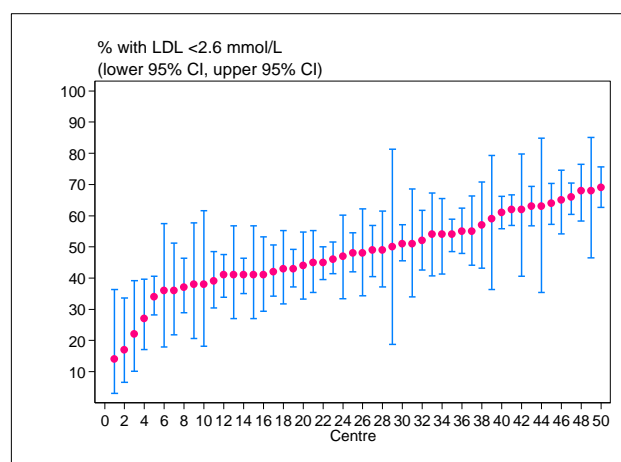


Table 6.2.6(b): Proportion of PD patients with LDL cholesterol <2.6 mmol/L, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	50	14	22	41	48	57	68	69
2022	48	18	20	34.5	48.5	53.5	65	67
2021	44	10	19	36	48.5	54.5	61	69
2020	42	11	13	31	48.5	56	62	71
2019	39	4	11	33	46	56	65	66
2018	36	9	16	30	48.5	57.5	70	71
2017	35	13	16	30	49	57	63	65
2016	34	18	21	36	42.5	54	67	67
2015	33	9	14	31	42	55	62	66
2014	29	14	20	30	39	53	60	62

As in previous years, there was only a small inter-centre variation in median triglyceride levels among PD centres (Figure 6.2.6c). There was some inter-centre variation amongst PD centres in the proportion of patients with serum triglyceride levels < 2.1 mmol/L. (Table & Figure 6.2.6d).

Table 6.2.6(c): Median serum triglyceride level among PD patients, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	50	1.3	1.3	1.4	1.5	1.6	1.9	2
2022	49	1.2	1.3	1.4	1.5	1.6	2	2.3
2021	46	1.3	1.4	1.4	1.5	1.6	1.9	2
2020	42	1.2	1.3	1.4	1.5	1.6	1.9	2.1
2019	39	1.2	1.2	1.4	1.5	1.7	2	2.1
2018	38	1.2	1.3	1.4	1.5	1.6	2	2.2
2017	36	1.3	1.4	1.5	1.6	1.7	2	2.1
2016	36	1.3	1.3	1.5	1.7	1.8	2	2.1
2015	34	1.4	1.4	1.5	1.6	1.6	1.8	2.6
2014	30	1.2	1.3	1.5	1.6	1.6	1.9	2.3

Figure 6.2.6(c): Variation in median serum triglyceride level among PD patients, PD centres 2023

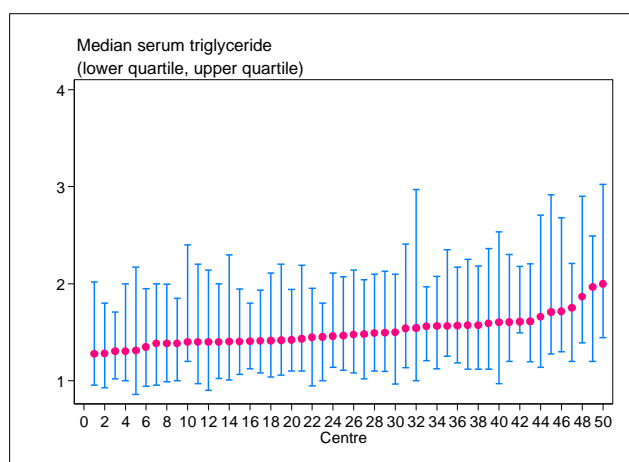


Figure 6.2.6(d): Variation in proportion of patients with serum triglyceride <2.1 mmol/L, PD centres 2023

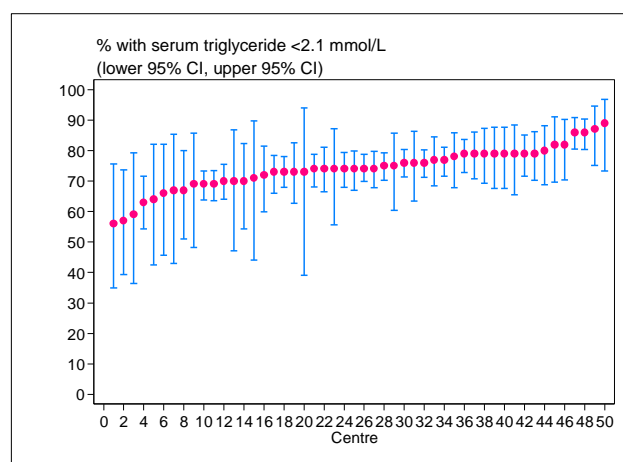


Table 6.2.6(d): Proportion of PD patients with serum triglyceride <2.1 mmol/L, PD centres 2014-2023

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2023	50	56	59	70	74	79	86	89
2022	49	47	50	69	74	78	83	85
2021	46	52	60	70	74.5	78	83	85
2020	42	52	58	68	73	77	81	100
2019	39	52	55	67	73	76	87	90
2018	38	47	56	68	71.5	77	83	85
2017	36	55	55	67	70	75.5	84	87
2016	36	53	61	65	69.5	75	88	90
2015	34	36	55	68	72.5	77	88	90
2014	30	43	58	64	72	76	79	81