APCN x TSN 2025

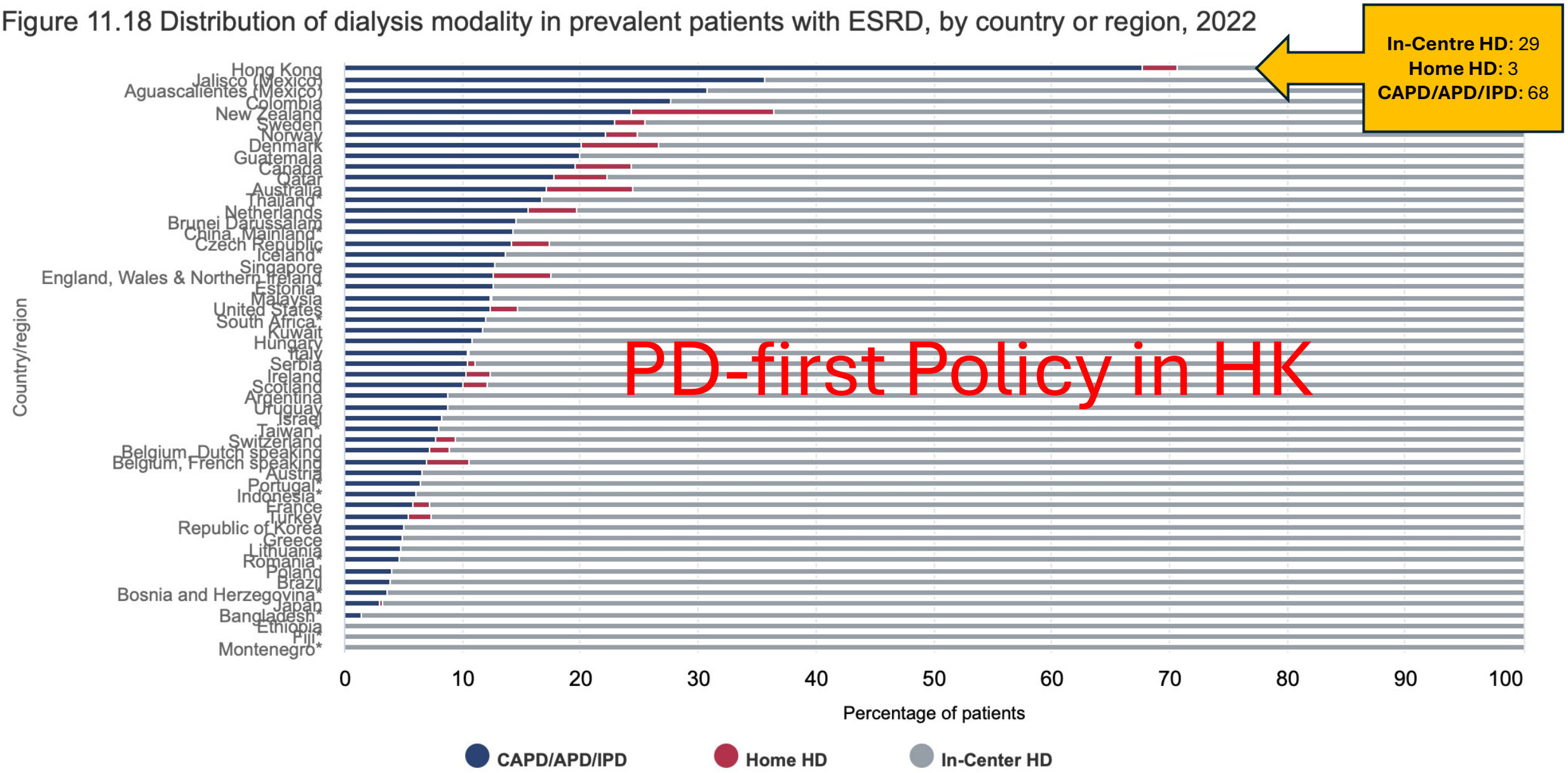
Public Policy Forum: Strategies to Promote Implementation of Home-based Dialysis Therapy

Hong Kong Perspective
"Strategies and Impacts of PD-first Policy in Hong Kong"

Dr. Wong Sze Ho, Sunny

Chairman, Central Renal Committee, Hospital Authority
Immediate Past Chairman, Hong Kong Society of Nephrology
Head of Nephrology, United Christian Hospital, HONG KONG

Figure 11.18 Distribution of dialysis modality in prevalent patients with ESRD, by country or region, 2022



Data Source: 2024 United States Renal Data System Annual Data Report

“Strategies and Impacts of PD-first Policy in Hong Kong”

- PD-first Policy in Hong Kong
- Strategies in Promoting PD-first Policy in Hong Kong
- Latest Status in Hong Kong
- Impacts of PD-first Policy in Hong Kong

Background of PD-first Policy

Public Healthcare Funding Model

Public Healthcare system in Hong Kong

Funding from the HK Government, it's not for profit and run by the public body Hospital Authority. A safety net covering all citizens and only charge a nominal fee for its services

> 90% of the population will utilize public healthcare to meet their healthcare need

Can only offer the most cost-effective mode of Renal Replacement Therapy to patients with ESKD

Establishment of PD-first Policy

- The First CAPD program was started in the United Christian Hospital in 1980
- Increasing number of ESKD patient on dialysis waiting list in the 80s'
- CAPD was established as a cost-effective chronic dialysis modality
- The Central Renal Committee (CRC) was established by the HK Government in 1985 to plan and make policy related to the provision of public renal service in HK
- PD-first policy was established in the same year as the guiding policy in public dialysis service provision

PD First Model in Hong Kong

For patients with ESKD who would like to seek treatment in the public healthcare system will be offered PD first unless the patients have contra-indications for undergoing PD.

Strategies on Implementing PD-first Policy

Centralized Governance & Planning

- Public Healthcare System provides >90% of renal replacement services in HK
- Central leadership from the Central Renal Committee overseeing the operation of all public dialysis unit with unified policy
- PD fluid is provided nearly free to our patients ($2USD for 16 weeks of PD fluid as of Dec 2025)

Build Successful PD Program

- PD centres development
- Staff training
- Multi-disciplinary care
- Patient support

PD programme offered in Hong Kong

- Self CAPD
- Assisted CAPD (family or institution helper)
- Self Automated PD
- Assisted Automated PD (family or institution helper)

PD Centre Development

16 renal centres providing PD treatment including one Paediatric Nephrology Centre

All adult renal centres have > 180 PD patients each with **12 centres > 250 patients** and **5 centres > 450 patients**

Centre Size Matters

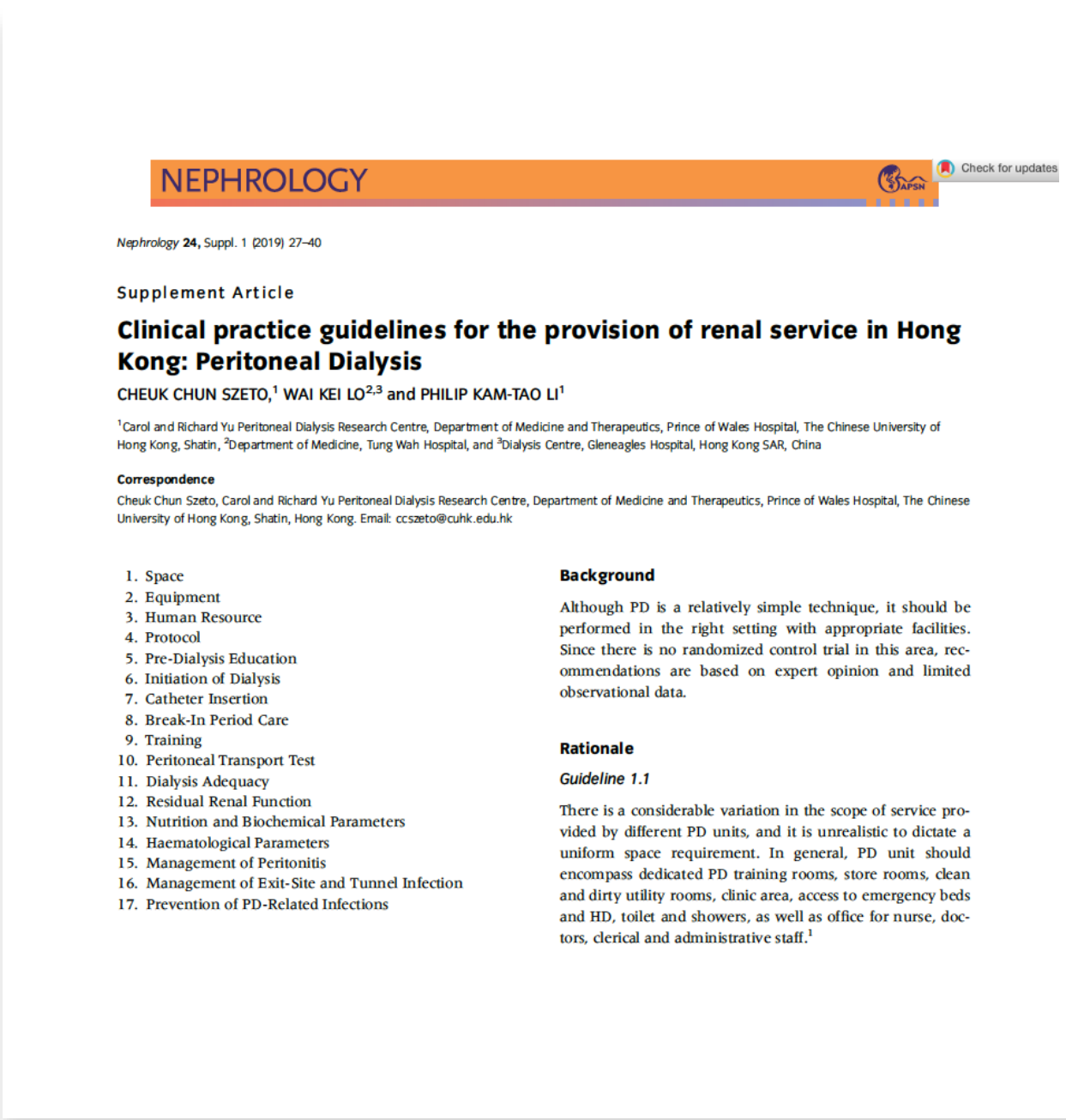
- Larger PD centre is associated with better technique survival rate compared with smaller centre

Nephrol Dial Transplant. 2002 Sep;17(9):1655-60.

- Optimal centre size in HK with dedicated staff helps to accumulate experience, build up expertise and enhance the training of our nephrologists and renal nurses with better clinical outcome

Clinical Practice guidelines developed by

- HA Central Renal Committee
- Hong Kong College of Physicians
- Hong Kong Society of Nephrology



NEPHROLOGY

Check for updates

Nephrology **24,** Suppl. 1 (2019) 27–40

Supplement Article

Clinical practice guidelines for the provision of renal service in Hong Kong: Peritoneal Dialysis

CHEUK CHUN SZETO,[1] WAI KEI LO[2,3] and PHILIP KAM-TAO LI[1]

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Correspondence

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Background

Although PD is a relatively simple technique, it should be performed in the right setting with appropriate facilities. Since there is no randomized control trial in this area, recommendations are based on expert opinion and limited observational data.

Rationale

Guideline 1.1

There is a considerable variation in the scope of service provided by different PD units, and it is unrealistic to dictate a uniform space requirement. In general, PD unit should encompass dedicated PD training rooms, store rooms, clean and dirty utility rooms, clinic area, access to emergency beds and HD, toilet and showers, as well as office for nurse, doctors, clerical and administrative staff.[1]

Nephrologist placement of Tenckhoff Catheter

- In most nephrology centre in HK, we have nephrologists experienced in performing Tenckhoff operation, backed up by in-house urologist
- Tenckhoff operation can be performed when needed without significant delay

Staff Training

Hospital Authority

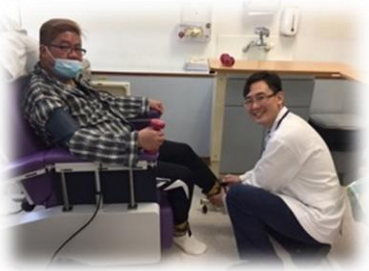
- Institute of Advanced Nursing Studies – **Post Registration Certificate Course on Renal Nursing**: organized annually, including theories and practicum with a lot of coverage on PD
- **Central Renal Committee Annual Commissioned Training**: 2 days structured training program that frequently covered PD related topic
- **Doctor's overseas training in PD centres** and **interventional nephrology**

醫院管理局
HOSPITAL AUTHORITY

Multi-disciplinary Care

Multi-disciplinary Care

Nurses



Physiotherapists

Occupational Therapists

Doctors

Patients & Relatives

Medical Social Worker

Clinical Psychologists

Pharmacists

Dietitians

Occupational Therapy:

Invention of 1st PD Connection Assistance Device in HK in 2006 in the United Christian Hospital

RENAL UNIT UCH
基督教聯合醫院腎科

2nd Generation Devices invented in 2018

Patented in 2020

RENAL UNIT UCH

基督教聯合醫院腎科

Original Article

PERITONEAL DIALYSIS INTERNATIONAL

Peritoneal Dialysis International
1–8

DOI: 10.1177/08968608221085430
journals.sagepub.com/home/ptd

SAGE

Device-assisted continuous ambulatory peritoneal dialysis: A single-centre experience

Wai Lun Will Pak, Ka Lok Chan, Zi Chan, Yick Hei Wong, Wai Ping Law, Chi Kwan Lam and Sze Ho Sunny Wong

Abstract

Background: Peritoneal dialysis (PD) patients with impaired hand–eye function require helper assistance. Our centre developed a connection device that assists patients with impaired hand–eye function to perform PD exchange themselves, but the clinical outcomes in these patients have not been investigated.

Methods: We retrospectively reviewed patients who had device-assisted continuous ambulatory peritoneal dialysis (CAPD) during 2007–2016 and compared their clinical outcomes with age- and sex-matched patients receiving helper-assisted CAPD.

Results: One hundred seventy-two patients (86 each in the device- and helper-assisted CAPD groups) were followed for 29.9 (19.4–43.3) months. The device- and helper-assisted groups had comparable peritonitis rates (0.489 and 0.504 episode per patient-year, respectively, $p = 0.814$), with no difference in the distribution of causative organisms and the organism-specific peritonitis rates. The device-assisted group showed similar peritonitis-free survival compared with the helper-assisted group (2.58 (1.85–3.31) vs. 1.78 (0.68–2.88) years, $p = 0.363$) and time-to-PD discontinuation (6.27 (3.65–8.90) vs. 4.35 (3.48–5.22) years, $p = 0.677$). The median patient survival was similar between the two groups (3.89 (2.22–5.55) vs. 3.81 (3.27–4.36) years in the device- and helper-assisted groups, respectively, $p = 0.505$).

Conclusion: Device-assisted CAPD confers comparable outcomes as helper-assisted CAPD and is a viable option in PD patients with impaired hand–eye function.

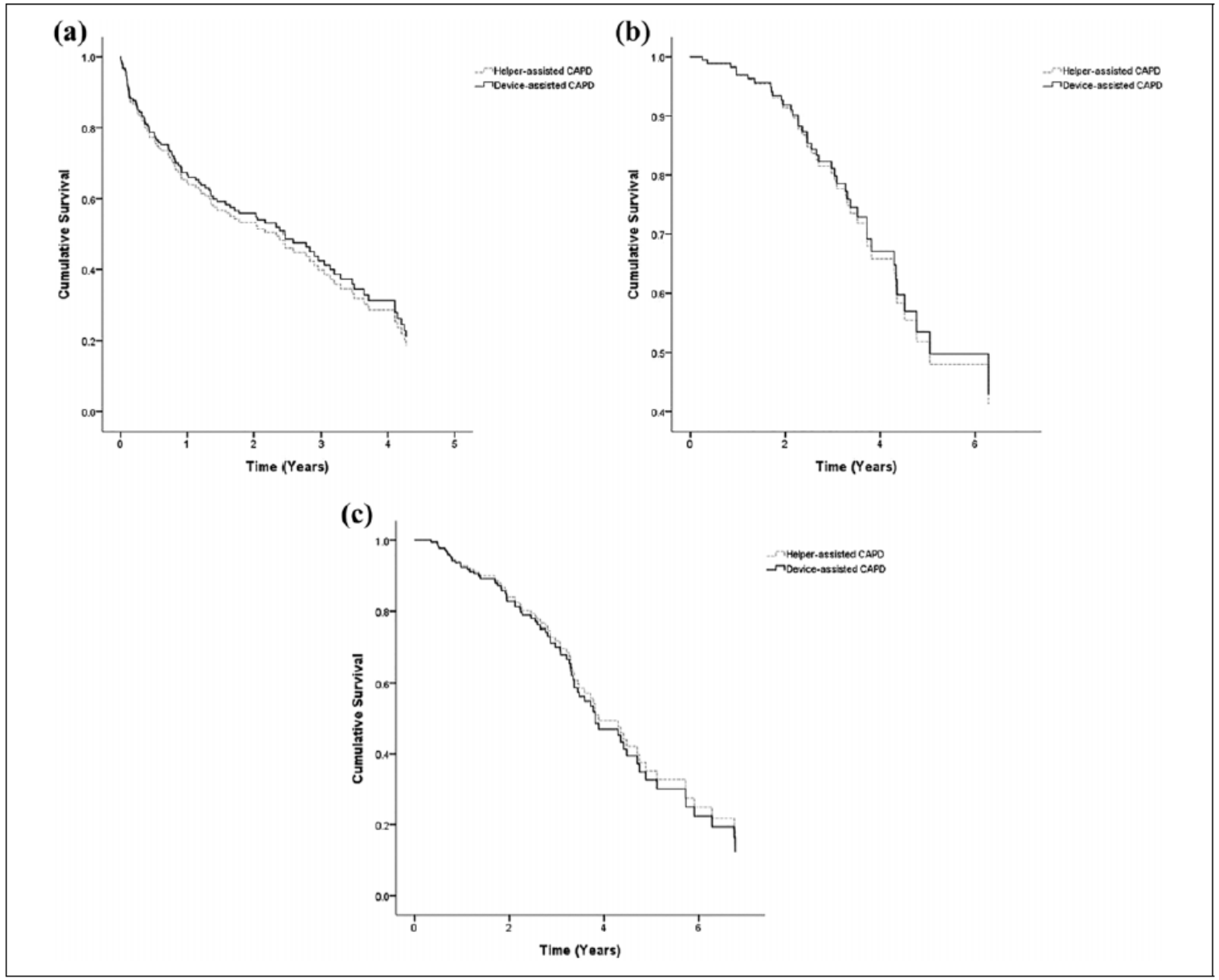


Figure 3. Peritonitis-free survival (panel (a)), time on PD therapy (panel (b)) and patient survival (panel (c)) in patients receiving device-assisted and helper-assisted CAPD. CAPD: continuous ambulatory peritoneal dialysis.

Patient Education & Support

Pre-Dialysis Program

- Doctor
- Renal Nurse
- Dietitian
- Physiotherapist
- Medical Social Worker
- Patient Group Representatives

All modalities of RRT are clearly explained, including palliative care

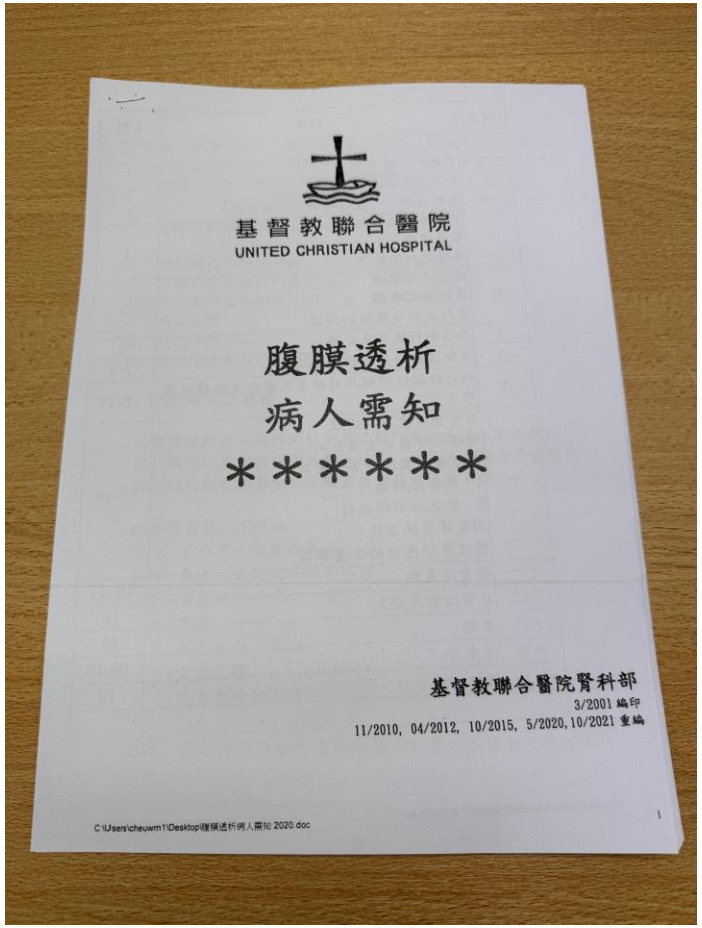
Comprehensive personalized Renal Replacement Therapy Planning

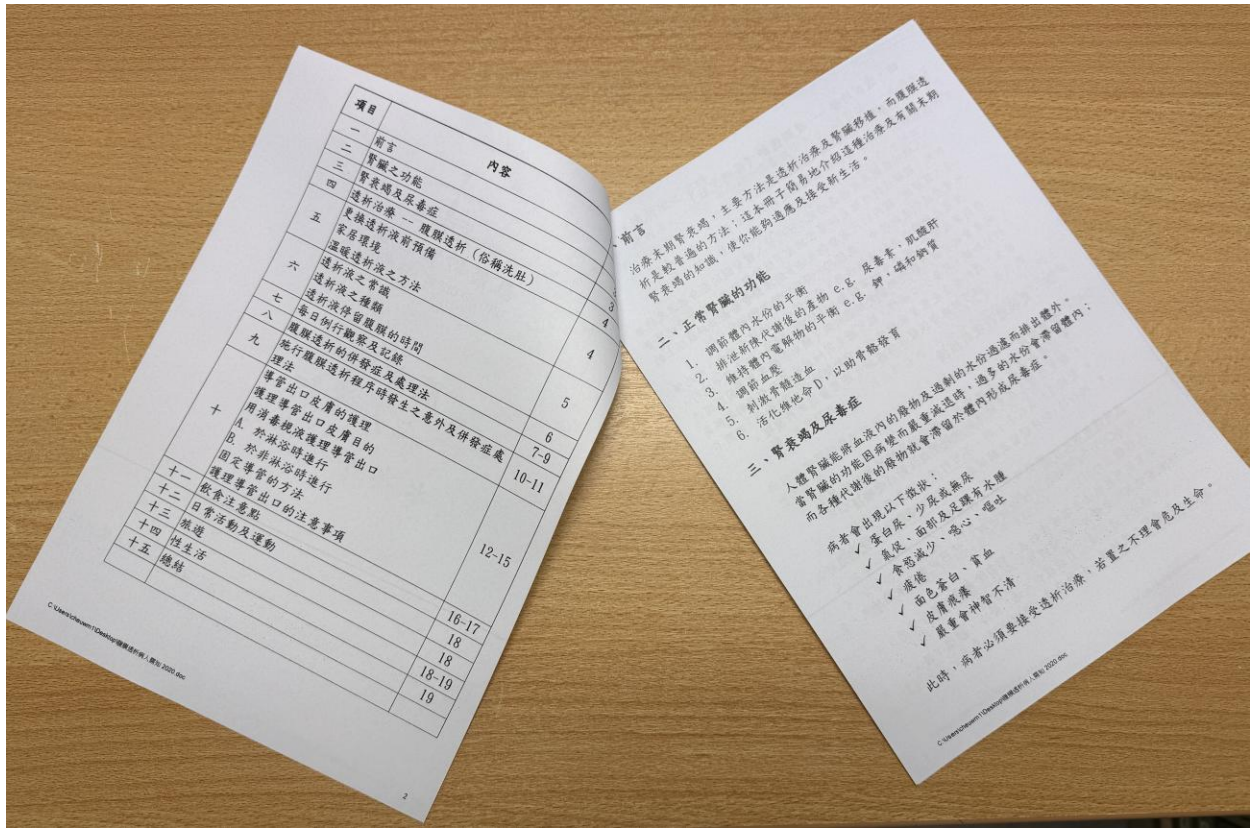
Comprehensive PD training Programme to the Patient and Home Carer

- Comprehensive training program on the theory and practice of CAPD and APD
- Skilled nursing trainer with program tailored to individual patient and family carer

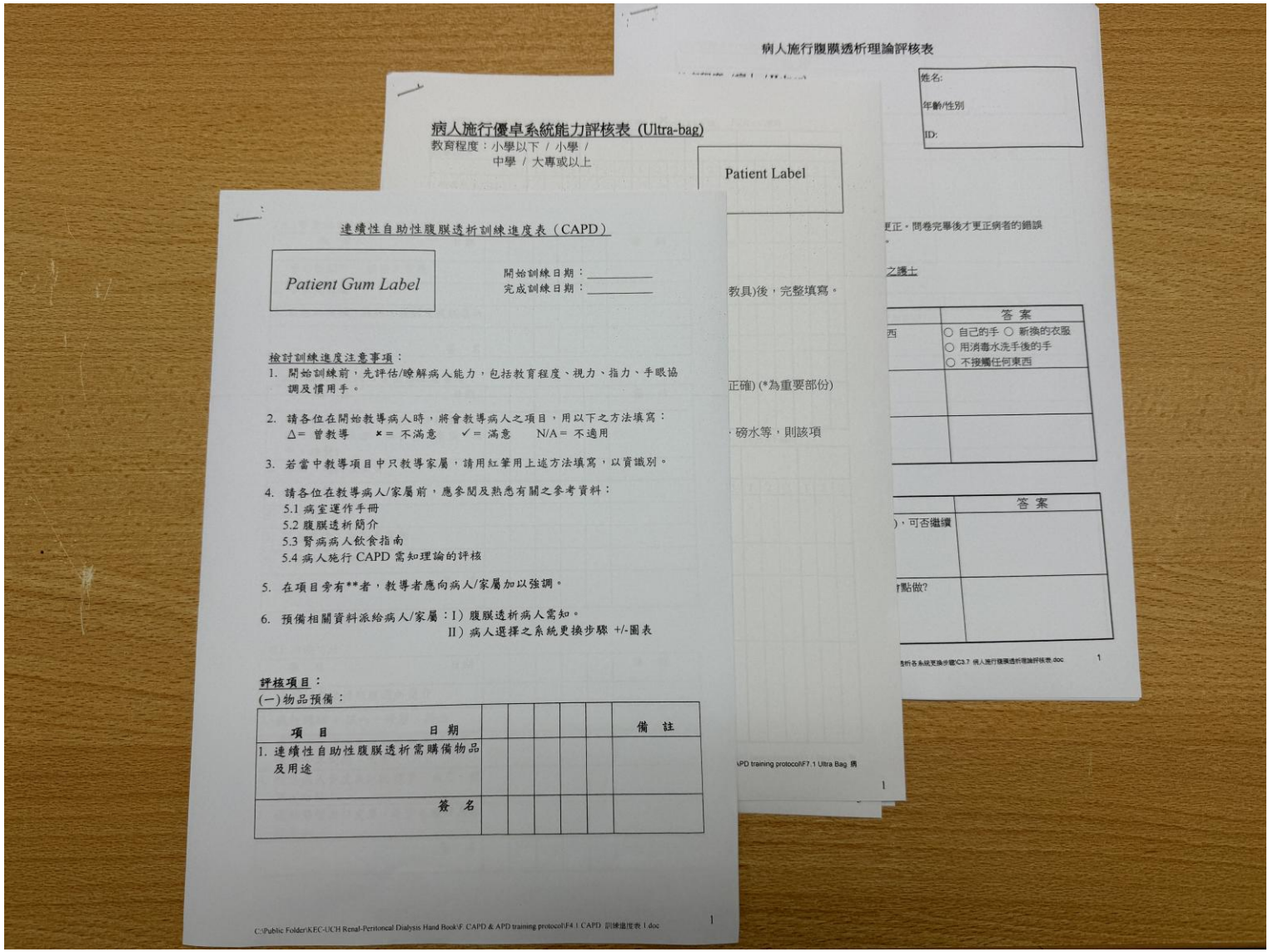
PD training Step by Step Guide

Information Guide for PD patient





PD patient training progress assessment, knowledge assessment



Leaflet on PD

24-hour Renal Hotline

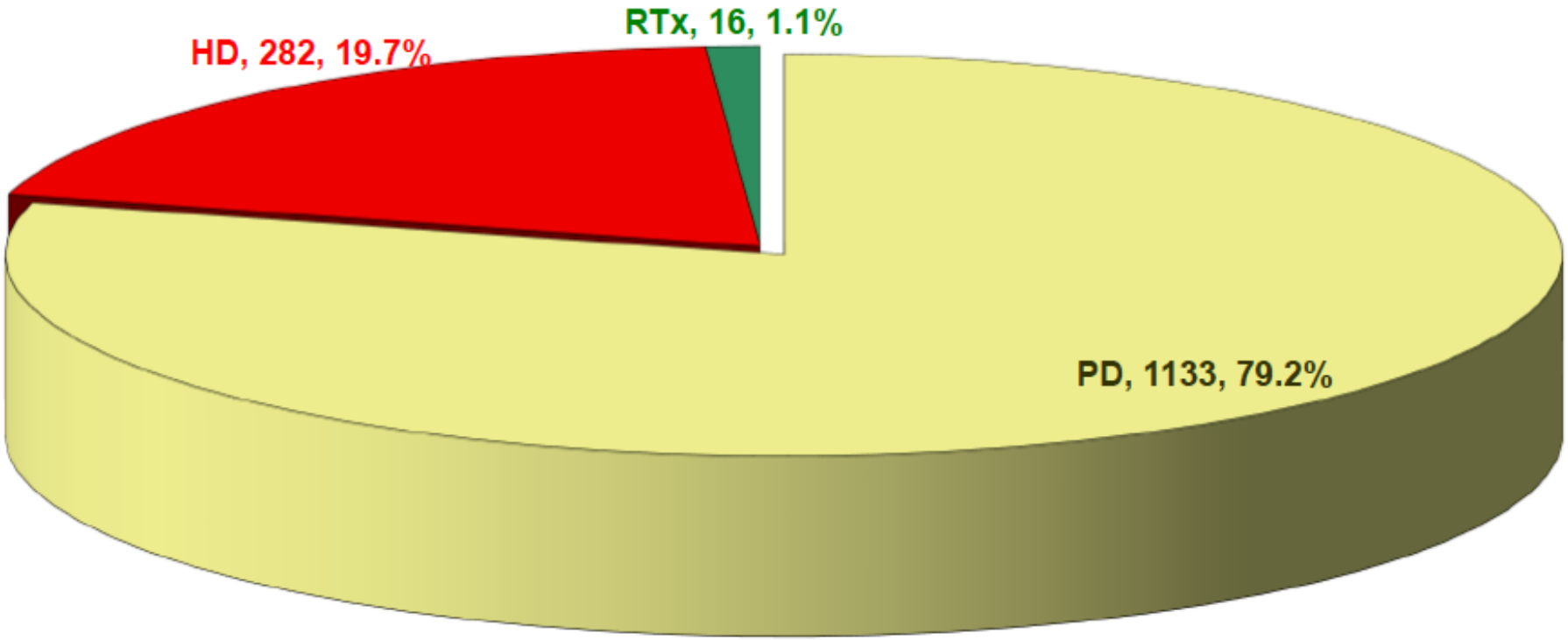
Community Nurse Support of Home PD

Staff supporting Renal Patient Group Spring Dinner

Latest Status of PD in Hong Kong

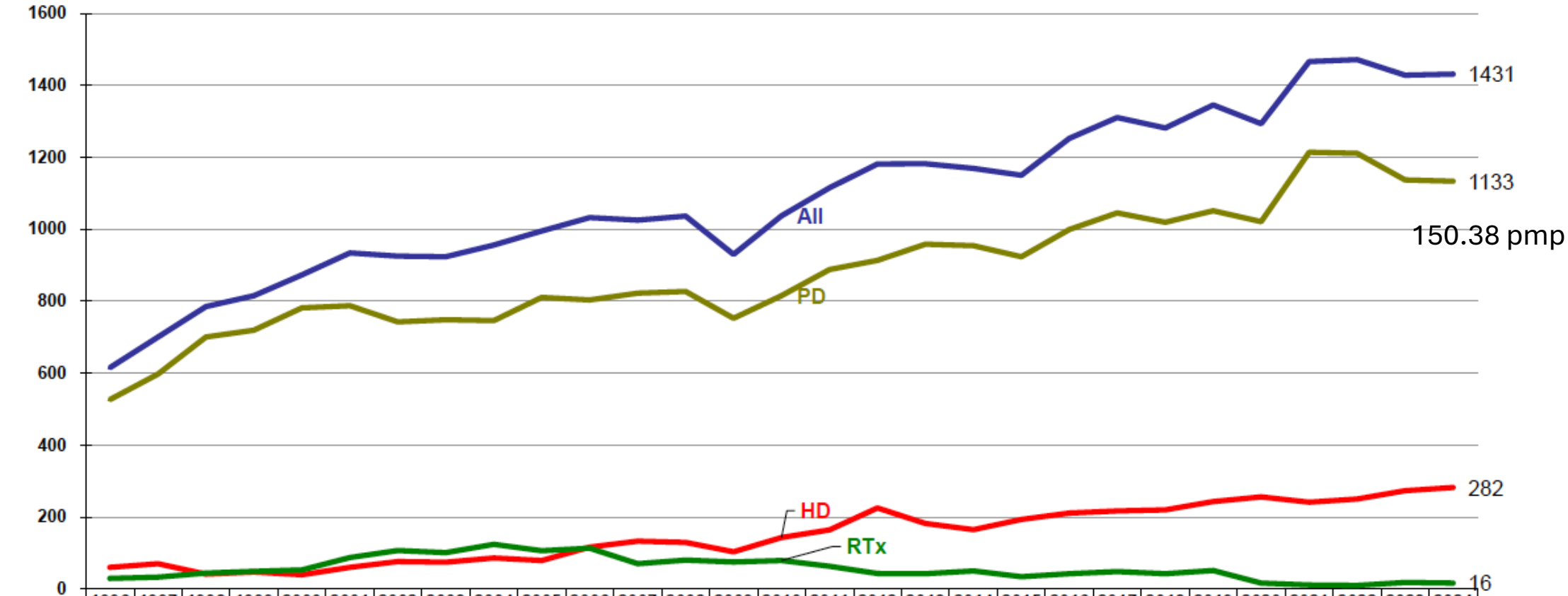
Distribution of 3 modes of RRT among Incident Patients in the year 2024

N = 1431



Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

Incident Count of Different Modalities of RRT, 1996-2024

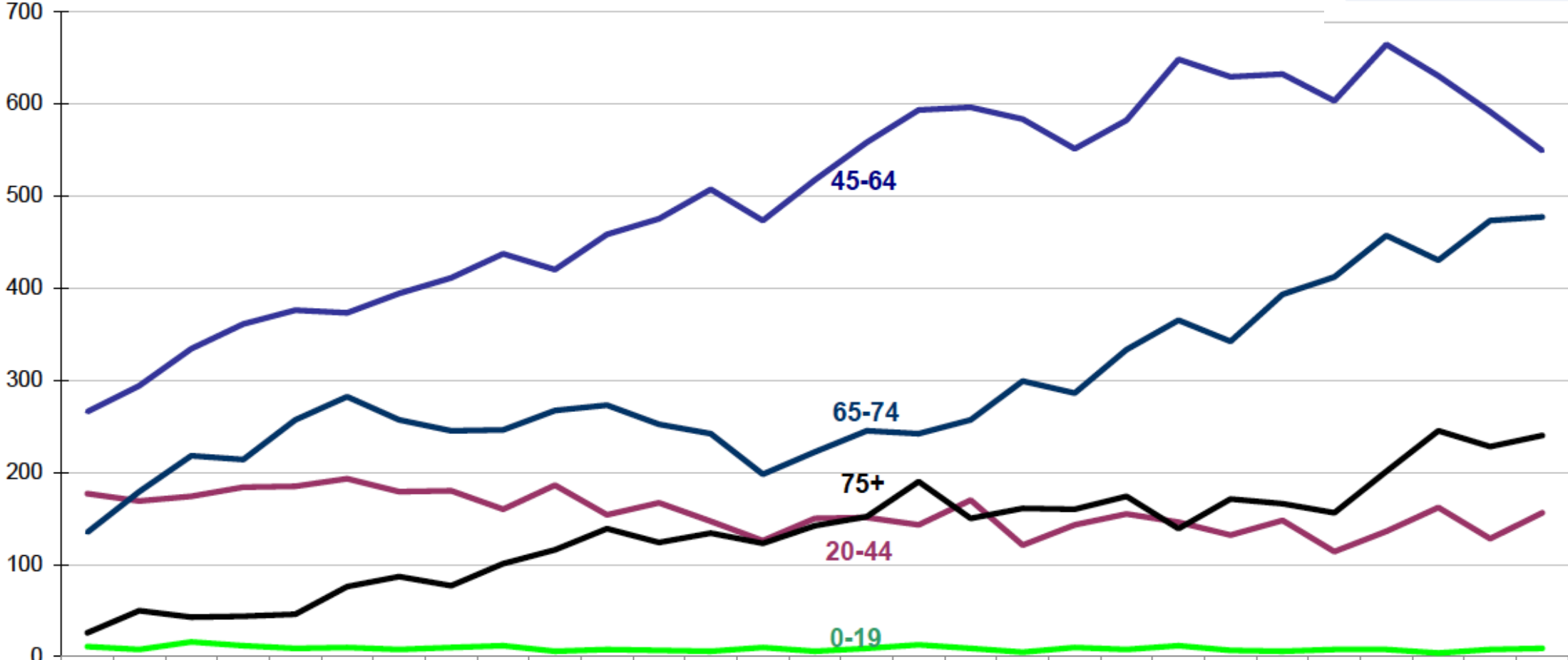


	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
All	615	700	785	815	873	934	925	923	956	995	1032	1025	1036	930	1037	1115	1181	1182	1169	1150	1252	1310	1281	1345	1293	1466	1471	1428	1431
PD	526	597	700	719	781	787	742	748	746	810	803	822	827	752	815	888	913	958	954	923	999	1045	1019	1051	1021	1214	1211	1137	1133
HD	60	70	41	47	39	60	76	74	86	79	116	133	129	103	143	164	225	182	165	193	211	217	220	243	256	241	250	273	282
RTx	29	33	44	49	53	87	107	101	124	106	113	70	80	75	79	63	43	42	50	34	42	48	42	51	16	11	10	18	16

Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

Incident Counts of ESKD on All RRT – Age Stratified, 1996-2024

Median 64.8
Mean 63.0

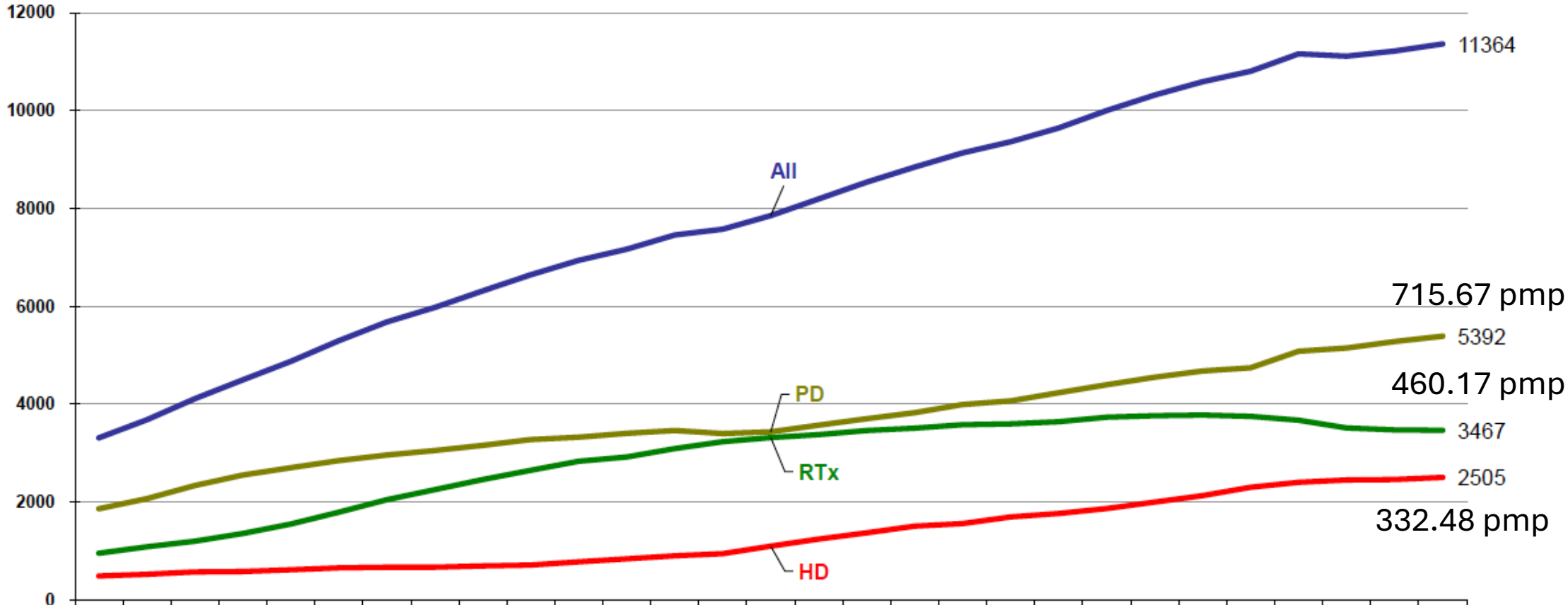


	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
0-19	11	8	16	12	9	10	8	10	12	6	8	7	6	10	6	9	13	9	5	10	8	12	7	6	8	8	4	8	9
20-44	177	169	174	184	185	193	179	180	160	186	154	167	147	126	150	151	143	170	121	143	155	146	132	148	114	136	162	128	156
45-64	266	294	334	361	376	373	394	411	437	420	458	475	507	473	517	558	593	596	583	551	582	648	629	632	603	664	630	591	549
65-74	135	179	218	214	257	282	257	245	246	267	273	252	242	198	222	245	242	257	299	286	333	365	342	393	412	457	430	473	477
75+	26	50	43	44	46	76	87	77	101	116	139	124	134	123	142	152	190	150	161	160	174	139	171	166	156	201	245	228	240

Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

Prevalent Count of Different Modalities of RRT, 1996-2024

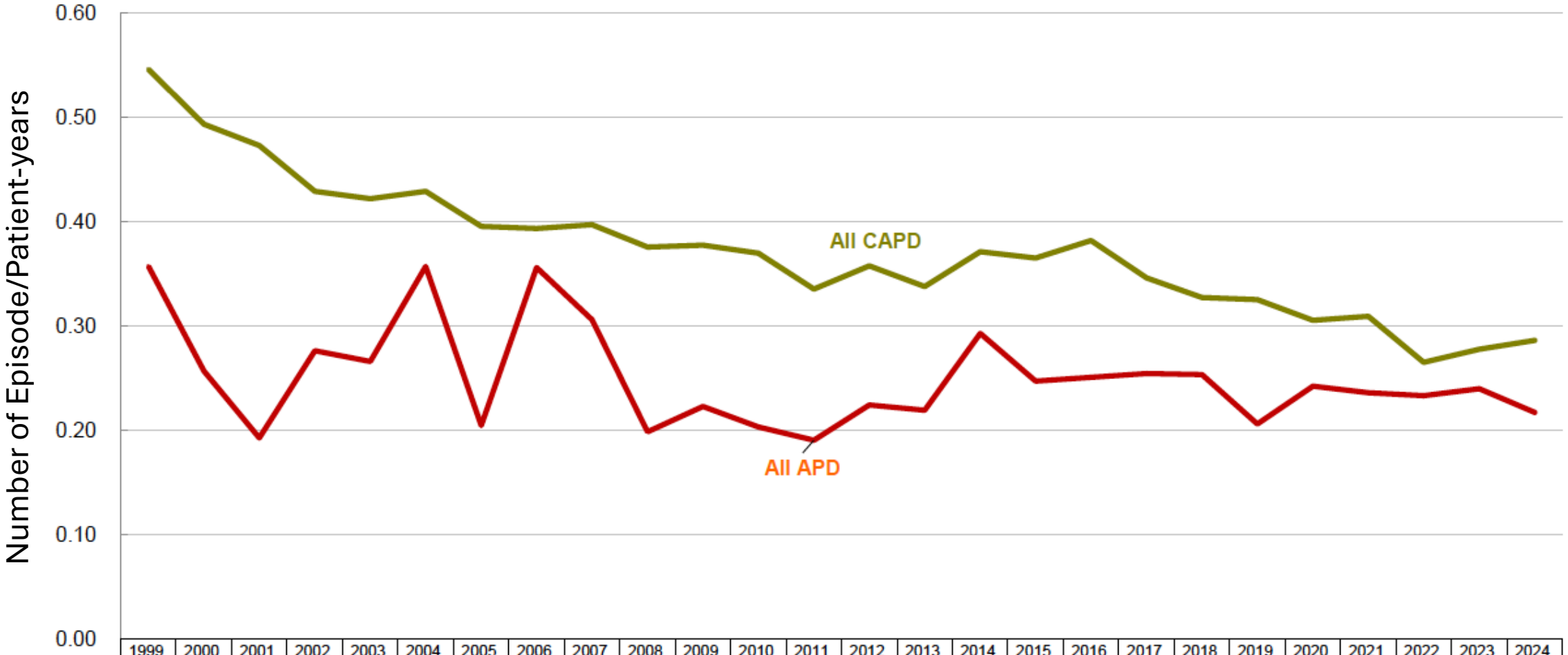
Age Median 62.0
Mean 61.6



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
All	3312	3681	4112	4498	4877	5301	5681	5979	6318	6646	6943	7171	7460	7580	7857	8197	8539	8847	9137	9368	9646	10003	10321	10591	10805	11164	11115	11220	11364
PD	1865	2069	2338	2555	2705	2850	2961	3054	3161	3279	3328	3406	3462	3401	3437	3573	3705	3829	3995	4070	4236	4399	4552	4679	4747	5086	5148	5280	5392
HD	491	524	572	582	618	656	672	670	695	714	780	842	903	945	1100	1246	1372	1507	1561	1700	1767	1870	2003	2133	2304	2403	2452	2462	2505
RTx	956	1088	1202	1361	1554	1795	2048	2255	2462	2653	2835	2923	3095	3234	3320	3378	3462	3511	3581	3598	3643	3734	3766	3779	3754	3675	3515	3478	3467

Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

PD Peritonitis, Number of Episode/Patient-years, 1999-2024



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
All CAPD	0.55	0.49	0.47	0.43	0.42	0.43	0.40	0.39	0.40	0.38	0.38	0.37	0.34	0.36	0.34	0.37	0.36	0.38	0.35	0.33	0.33	0.31	0.31	0.27	0.28	0.29
All APD	0.36	0.26	0.19	0.28	0.27	0.36	0.20	0.36	0.31	0.20	0.22	0.20	0.19	0.22	0.22	0.29	0.25	0.25	0.25	0.25	0.21	0.24	0.24	0.23	0.24	0.22

Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

PD Technique Survival, Death Censored (patient starting PD from 2010-2019)

Year after starting PD	PD Technique Survival (Death Censored)
1 year	96.52%
2 year	93.39%
5 year	80.79%
10 year	60.79%

Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

PD Patient Survival (patient starting PD from 2010-2019)

Year after starting PD	Patient Survival
1 year	92.61%
2 year	83.40%
5 year	53.38%
10 year	32.84%

Data from Hong Kong Renal Registry, Central Renal Committee, Hospital Authority

Impacts of PD-first Policy in Hong Kong

Economic Impact and Cost-Effectiveness

- **Substantial Cost Savings**:
  - Hospital based HD is **3.38 times more expensive** than PD in Hong Kong
  - PD-first policy enables treatment of more patients within same budget

Nephrol Dial Transplant (2019) 34: 1565–1576

- **Hong Kong Current Healthcare Expenditure** (2023-2024):
  - Current expenditure on health: **8.3% of GDP (Public 4.3%, Private 4%)** with 8.6% increase compared with previous year
  - The public Health Expenditure increased 1.5 times in 10 years, increasing at a comparable rate as the growth of the population > 65
  - Significantly lower than US (16.7%), Japan (12.3%), and UK (11%)

Hong Kong's Domestic Health Accounts 2023/24, Health Bureau, Hong Kong SAR

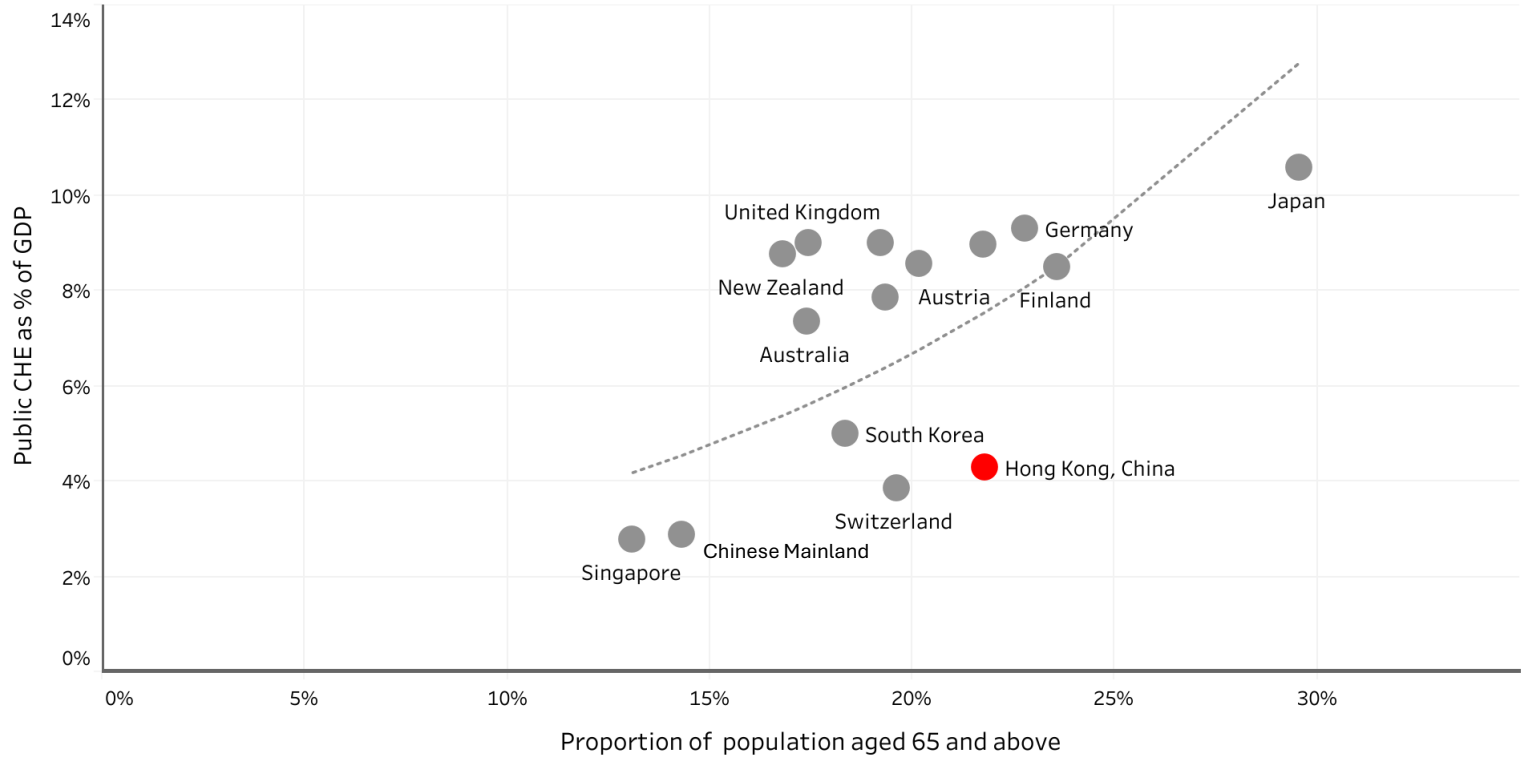
Hong Kong's Domestic Health Accounts (DHA) | **2023/24**

(Exclude identified COVID-19 expenditure during 2019/20 - 2022/23)

Select Financial Year: 2023/24

Show Public CHE vs Elderly population | Show Public CHE vs Tax revenue | Show Summary | Show Detailed Table

Public Current Health Expenditure (CHE) and Proportion of population aged 65 and above



The latest Public CHE data for Australia, Japan, Singapore and Chinese Mainland as of 2022, for the year 2023/24.

Contribution to Research & PD Practice Advancement

Kidney International, Vol. 64 (2003), pp. 649–656

Effect of Kt/V on survival and cl
patients in a randomized prospec

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http://www.kidney-international.org

see commentary on page 1107

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Short Report

**Diagnostic accuracy and clinical v
polymerase chain reaction tests fo
Mycobacterium tuberculosis in peri
dialysis effluent: A 20-year single-c
retrospective study**

Wai Lun Will Pak[1], Kin Chung Wong[2], Sandy Ka Yee Chau[2], Ka Lok Chan[1], Zi Chan[1], Yick Hei Wong[1], Wai Ping Law[1], Chi Kwan Lam[1] and Sze Ho Sunny Wong[1]

PERITONEAL DIALYSIS INTERNATIONAL

Special Series/Guidelines

ISPD Catheter-related Infection Recommendations: 2023 Update

Peritoneal Dialysis International
1–19

DOI: 10.1177/08968608231172740
journals.sagepub.com/home/ptd
Sage

Kai Ming C
Ali Abu-Alf
Brett Cullis
Helen Hurs
Johann Mor
Simon Wai

PERITONEAL DIALYSIS INTERNATIONAL

Special Series/Guidelines

ISPD peritonitis guideline recommendations: 2022 update on prevention and treatment

Peritoneal Dialysis International
2022, Vol. 42(2) 110–153

DOI: 10.1177/08968608221080586
journals.sagepub.com/home/ptd
SAGE

Philip Kam-Tao Li[1,2], Kai Ming Chow[1,2], Yeoungjee Cho[3,4], Stanley Fan[5], Ana E Figueiredo[6], Tess Harris[7], Talerngsak Kanjanabuch[8,9], Yong-Lim Kim[10], Magdalena Madero[11], Jolanta Malyszko[12], Rajnish Mehrotra[13], Ikechi G Okpechi[14], Jeff Perl[15], Beth Piraino[16], Naomi Runnegar[17], Isaac Teitelbaum[18], Jennifer Ka-Wah Wong[19], Xueqing Yu[20,21] and David W Johnson[3,4]

Global Impact & Adaptation

- **International Recognition**:
  - Influence on announcing the **Advancing American Kidney Health Initiative** in 2019 by the US Department of Health and Human Services (target: 80% home dialysis or transplant by 2025)
  - During a **roundtable discussion** with Asian academic nephrologists and government officials in the **11th Congress of International Society for Peritoneal Dialysis** held in Hong Kong in 2006, the delegates agreed that **PD was well suited to act as first-line therapy** in an integrated approach to kidney care and **wider utilization can help to contain ESKD treatment expenditure**
- **Experience Sharing**:
  - Official visits from Thailand, Singapore, China, Taiwan, Malaysia, Mongolia
- **Successful Adoption Examples**:
  - **Thailand**: Implemented PD-First policy (2008) under universal coverage scheme, resulting in 100% increase in PD patients within one year
  - Multiple countries developing PD-Favored or Home Dialysis-First policies inspired by Hong Kong model

Conclusions

- Hong Kong has been practicing PD first policy since 1985 with sustained success
- Our success build on healthcare policy, central governance, reimbursement model, commitment to build good PD service with self and assisted PD program, centre and staff development, building up of multi-disciplinary patient-centred care team, and good patient and carer education and support
- Our large PD program enable us to enhance our understanding on PD, continuously improving our care, and contributed to research and practice advancement
- It results in significant healthcare cost saving
- Our experience provides replicable model for sustainable kidney care worldwide

Hong Kong Society of Nephrology Council 2024/25

Central Renal Committee, Hospital Authority 2025

United Christian Hospital Renal Team 2024


Thank You!