

Asia-Pacific Perspectives: *Gaps , Challenges and Opportunities of PD*

Dr Lily Mushahar

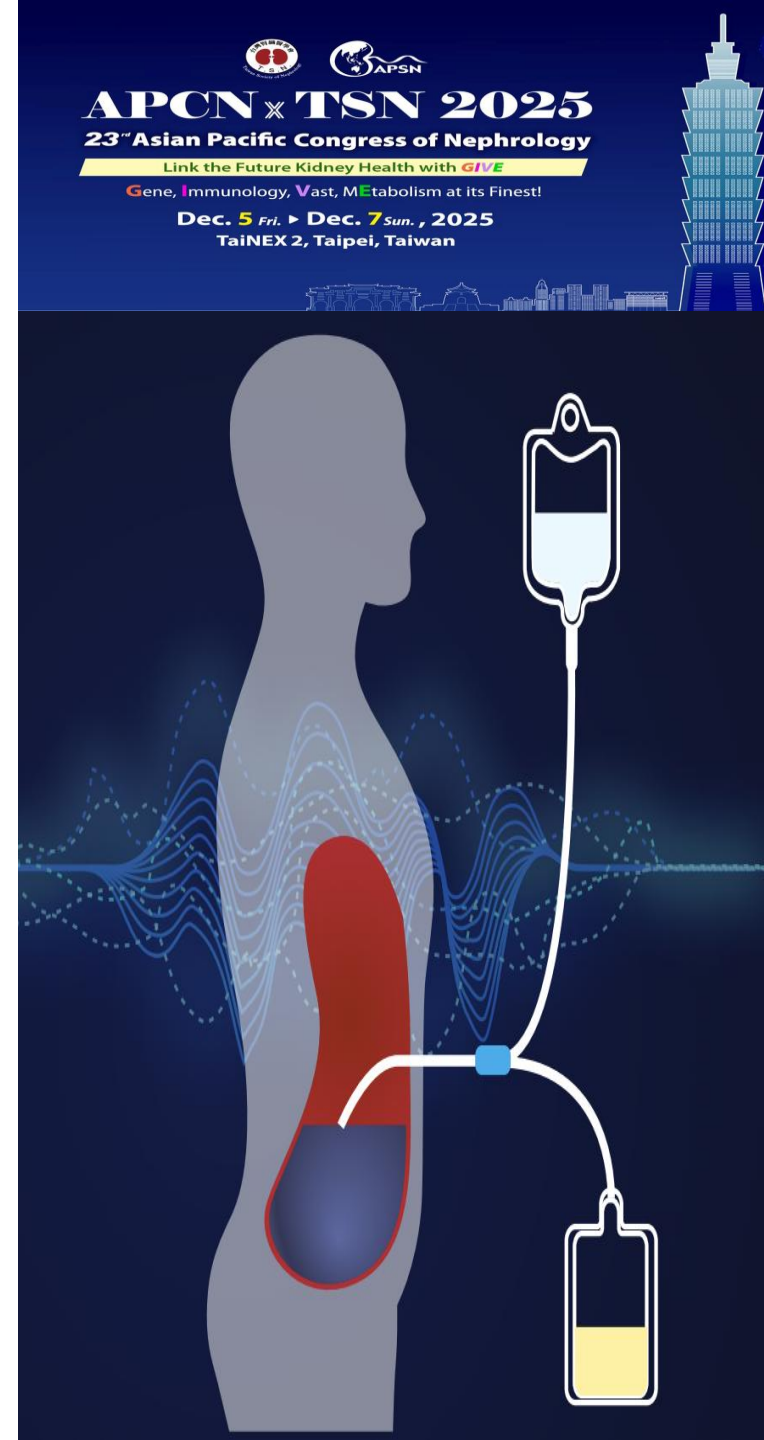
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Chair, ISPD Membership Committee

Chair, APSN CME committee



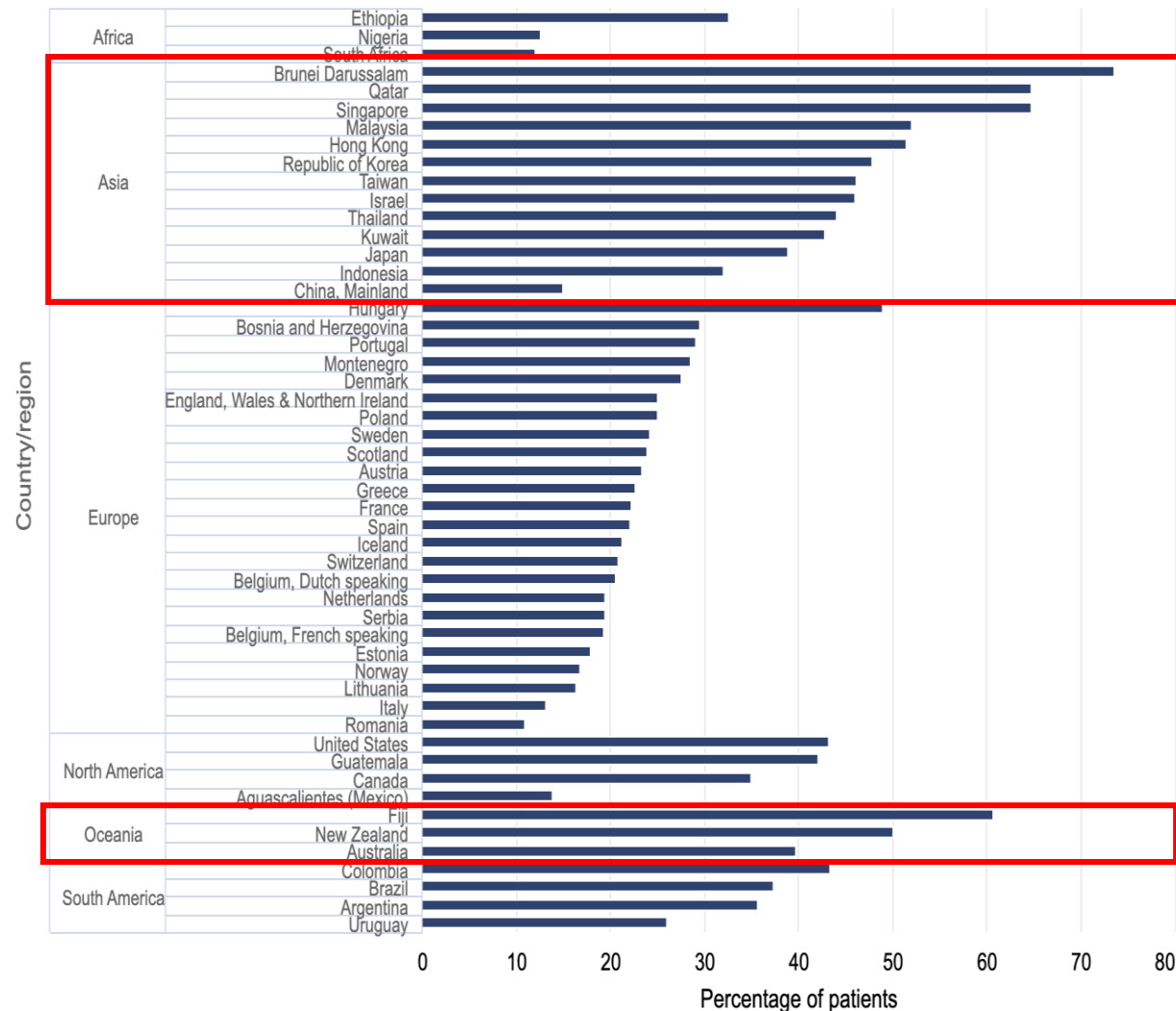
Disclosure

Speaker honorarium – Baxter, Fresenius, Boehringer Ingelheim, Astra Zeneca

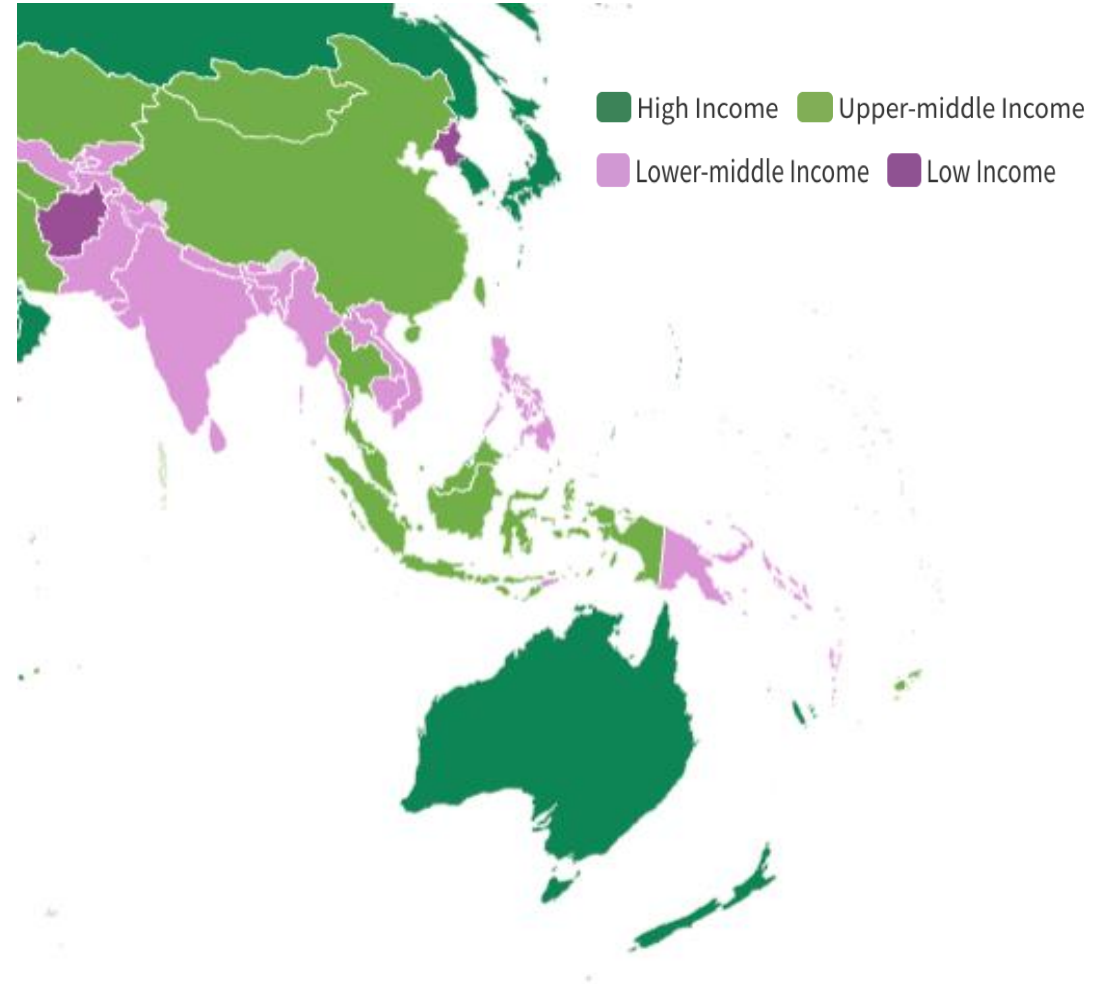
Research grant – Baxter, Fresenius for PROMiSE study

- End stage kidney disease (ESKD) is increasing world-wide with Asia Pacific to have a significant and rapid rise in both in incidence and prevalence of ESKD each year

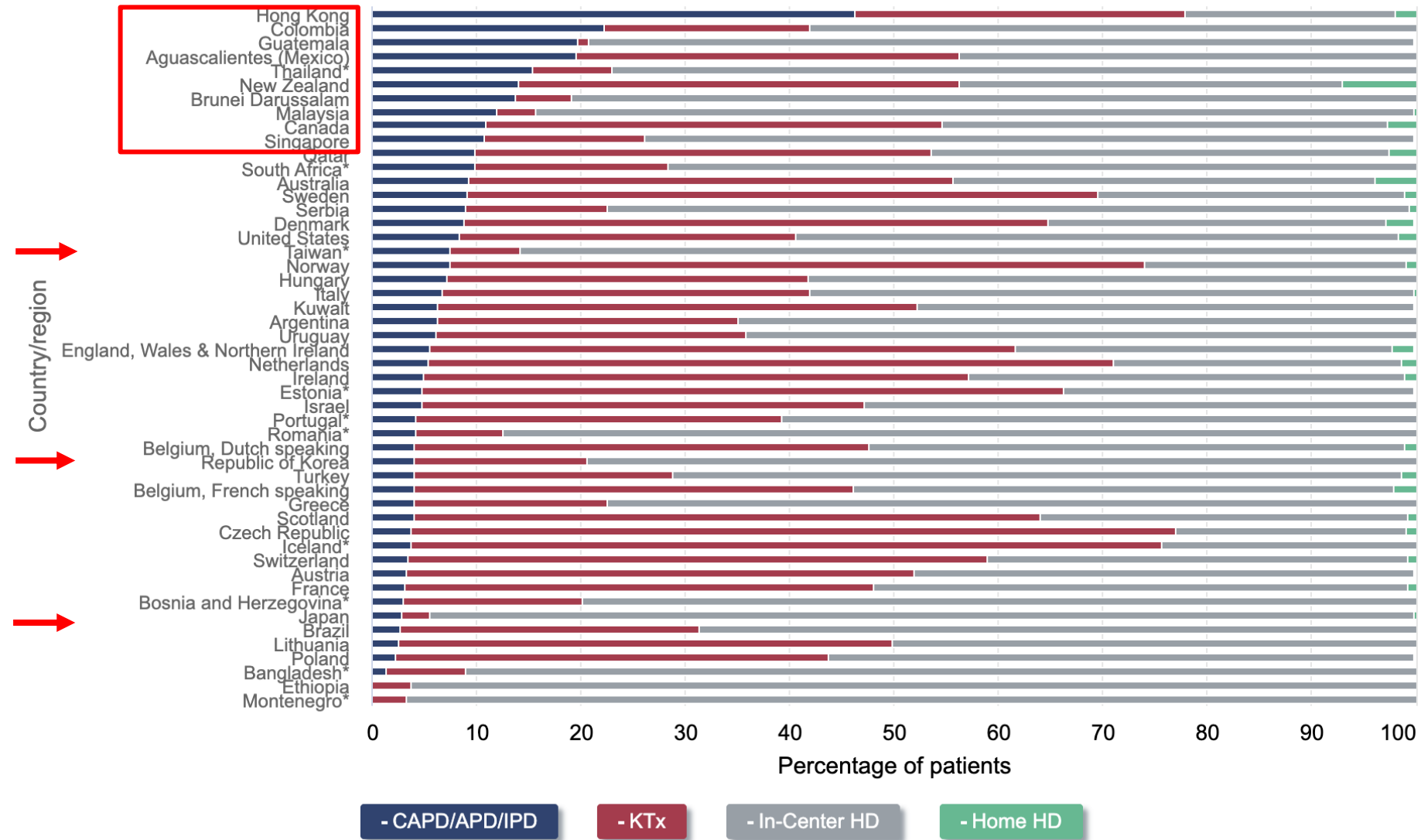
Incidence of treated ESKD, by region 2022



- Many countries in the Asia Pacific have **inadequate kidney health care** capacity (availability of KRT, low public funding or access to KRT and high disease burden)
- The rising burden of CKD and ESKD rapidly growing across Asia Pacific necessitates the use of scalable kidney replacement therapy (KRT) which is PD



Percentage of ESKD, by treatment modality 2022





PD First Policy Hong Kong
since 1985



PD First Policy Thailand
since 2008

Region	No. of Prevalent KRT Patients ^a	Modality			Funding		
		% HD	% PD	% Tx	% Government Funded	% Self-funded (Private)	% NGO, Employer, or Other Funded
East Asia							
China (Mainland)	HD: 524,467 PD: 86,344	85.86%	14.1%	NA	NA	NA	NA
China (Hong Kong)	10,258	19.1% (90.1% in- center, 9.9% home)	44.2%	36.5%	94%	6%	4%
Taiwan	81,340	87.3% (99.99% in- center, 0.01% home)	8.5%	4.2%	100%	0%	0%
Japan	330,000	97.3% (88.2% in- center, 9.1% home)	2.2%	0.5%	100%	0%	0%
South Korea	93,884 ³⁹	73.3% (all in-center)	7.3%	19.4%	90%	10%	0%
Southeast Asia							
Singapore	8,166	71.6% (all in-center)	10.1%	18.7%	27.4% ^b	27.8%	44.7% ^c
Malaysia	41,525	85.3% in-center, 1% home	9.5%	4.3%	67.1%	14.9%	15.7%
Philippines	32,077	95.8% (all in-center)	4.2%	ND	NA	NA	NA
Thailand	85,848	63.1%	28.2%	8.7%	HD: 59% PD: 96%	HD: 18.2% PD: 0.9%	HD: 22.8% PD: 2.6%
Brunei	778	84.3% (all in-center)	9.6%	6.0%	100%	0%	0%
Cambodia	600	100%	0%	0%	0%	100%	0%
Indonesia	NA	97.5%	2%	0.5%	90%	7%	3%
South Asia							
India	174,000 ⁴⁰	90% (>99% in- center, <1% home)	8%	2%	30%	50%	20%
Nepal	5,000	NA	NA	NA	83%	17%	0%
Bangladesh	30,000	93.5% (all in-center ^d)	1.5%	5%	4%	95%	1%
Others							
Central Asia: Mongolia	1,247	60.6%	5.2%	34%	80%	20%	0%
Western Asia (Middle East): Jordan	9,300	57% (all in-center)	1%	43%	90%	10%	0%

Note: Values are according to the latest available data.

Abbreviations: KRT, kidney replacement therapy; HD, hemodialysis; NA, not available; ND, no data; NGO, nongovernmental organization; PD, peritoneal dialysis; Tx, transplantation.

^aThis value includes both dialysis patients and transplant recipients.

^bGovernment hospital care.

^cFunded by voluntary welfare organizations.

^dBy month 6, a total of 70% of patients have dropped out.

**What are the gaps
of PD growth in
Asia Pacific?**

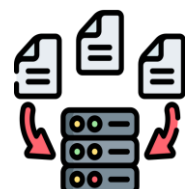


Gaps & Key challenges



**Fragmented
local
policies**

Absent fundings for
PD
More in favor for HD



**Insufficient
data &
registries**

Lack of
standardized
outcomes
reporting across
the region
impedes quality
improvements
and bench
markings



**Supply chain
and access to
dialysate and
consumables**

Urban-rural
access
disparities



**Cost &
reimbursement
disincentives**

Absence of
central
funding

Not attractive
to government
and private
hospital
provider



**Workforce
and PD
catheter
access
training
shortage**

Inadequate
PD training

PD nurses
burnt-out

Long PD
catheter
insertion wait
list



**Low awareness and
patients/provider
attitudes**

Inconsistent
training &
patient
education



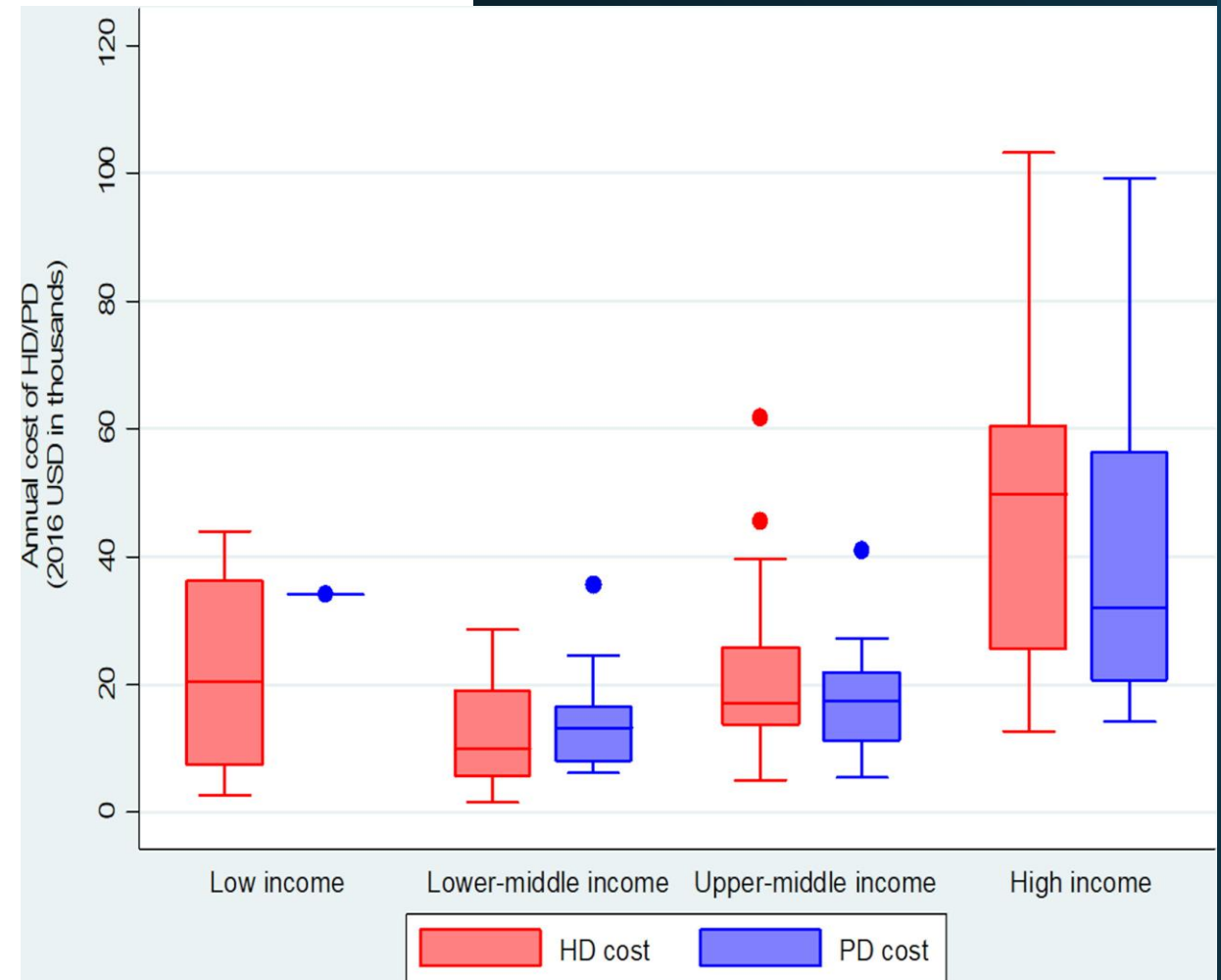
**Lack of
structured
Assisted PD
program**

Absence of
support for
assisted PD

Unpaid
assisted
family
member

Costs of PD & consumables

- The cost of PD fluids and associated equipment such as tubing or drainage bags is often much higher than that of HD in countries that lack the capacity for local production
- Cost of PD fluids borne out of pocket by patients in LLIC (annual costs of PD is higher than HD i.e 2-5x)

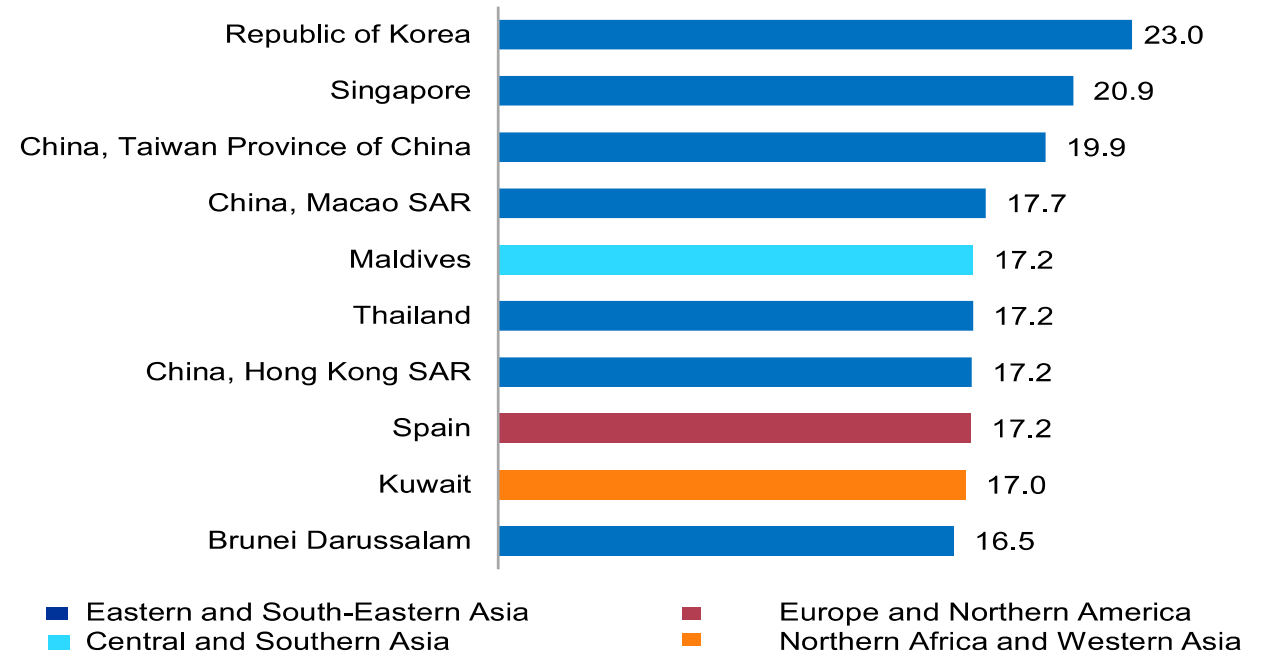


Annual cost of HD and PD by country World Bank income groups. Values represent the median (interquartile range); HD, haemodialysis; PD, peritoneal dialysis

Ageing Population in Asia Pacific

- Population ageing has been fastest in Eastern and South-eastern Asia
- 1 in 5 of people in Asia Pacific will be more than 60 years by 2050
- In 2050, 80% of older people will be living in low- and middle-income countries

Countries with largest percentage in older person > 65 years

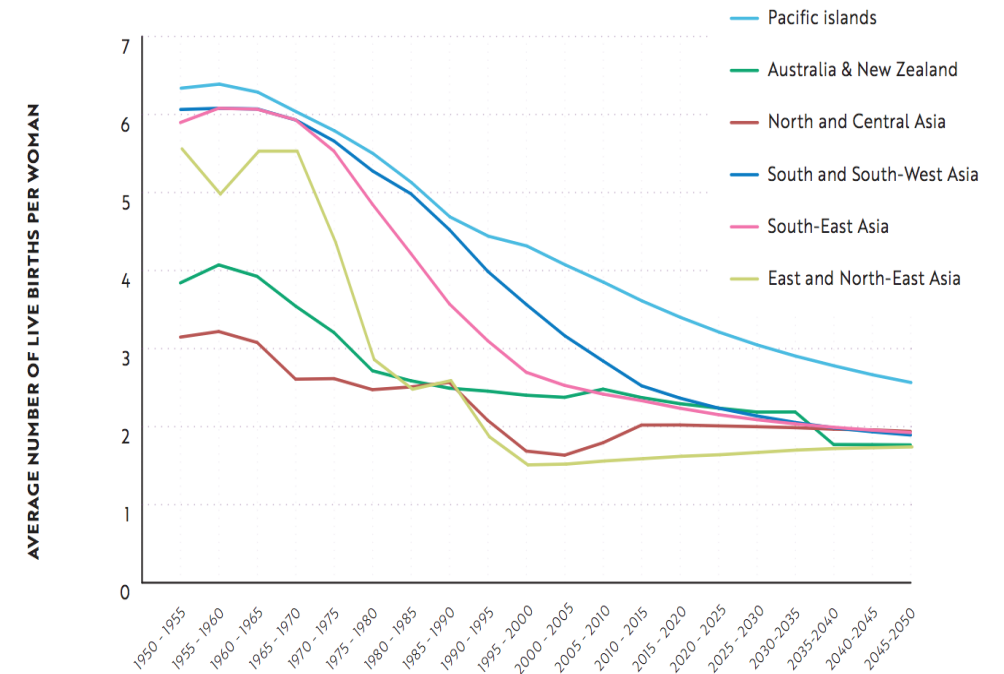


Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Population Prospects 2019*.

Changing Value of Family Support in Asia

- The “empty-nest” elderly who do not live with their children or have children is on the rise (due to economic prosperity and one child policy in certain Asia countries)
- But now, the families are getting smaller and children not staying with their parents
- No structured asPD program in Asia Pacific (mainly performed by unpaid caregivers (family), domestic helper or, nursing home as compared to Europe

Figure 1 **Total fertility rate, by ESCAP subregion, 1950–2050**
Fertility has declined sharply in East and North-East Asia.

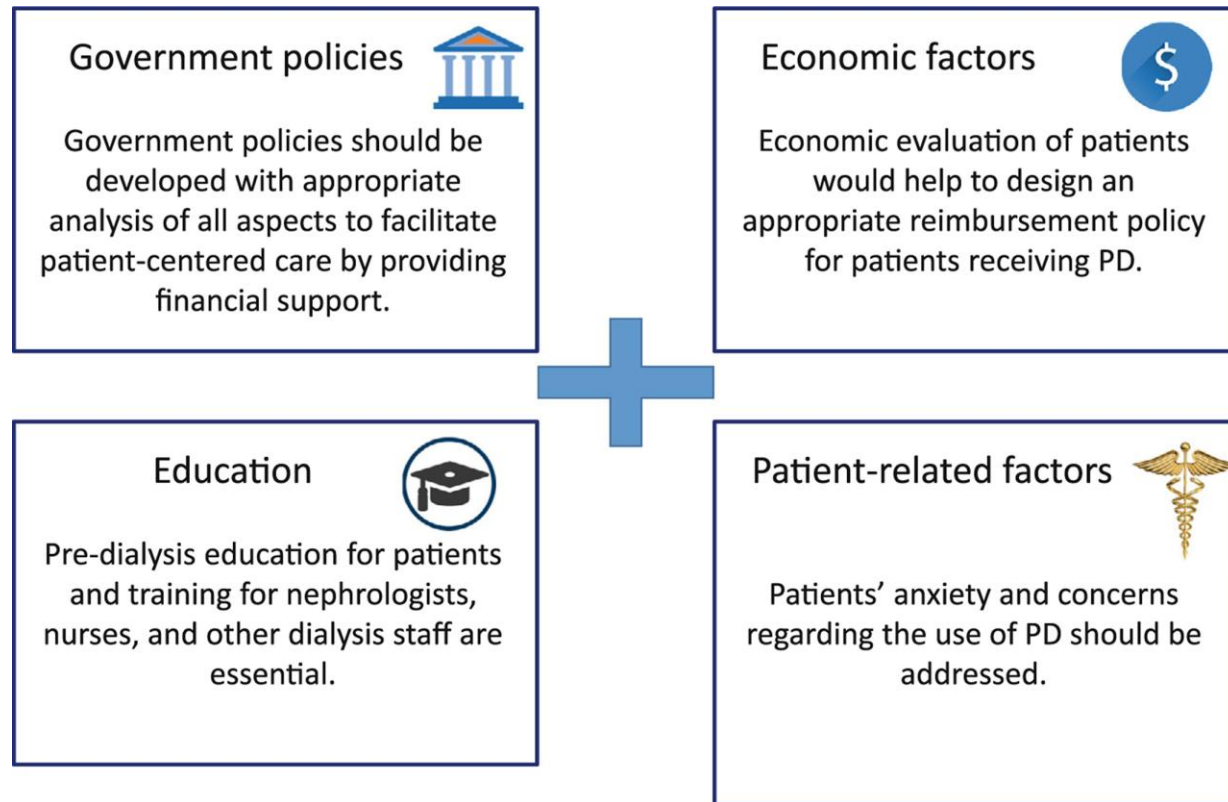


Source: ESCAP based on DESA, 2017.

What are the
opportunities?



Policy-initiatives that use PD-first/preferred policy



Learning from Hong Kong & Thailand



Prof Philip Li (Hong Kong) Visit
Meeting with Malaysia Ministry of Health 2019



Prof Kriang (Thailand) Visit
Meeting with Malaysia Ministry of Health July 2025

Change in Government Policies: Implement PD-first policy

- PD first in Ministry of Health facilities since 2022
- To encourage PD uptake in private hospitals



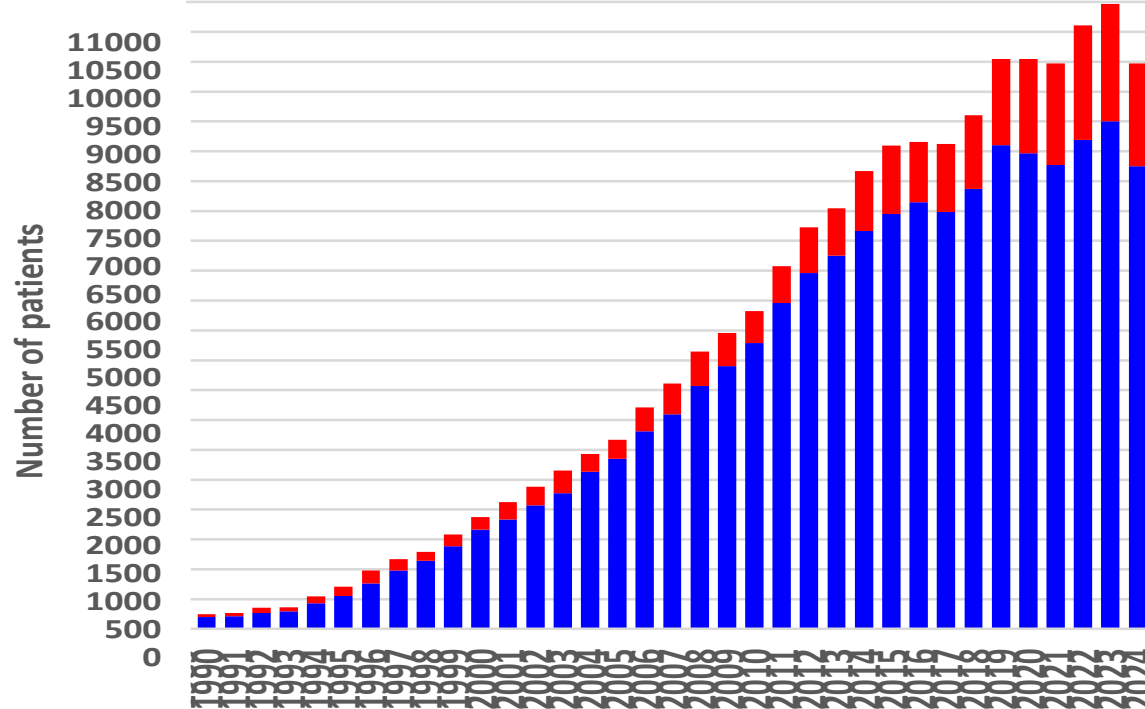
Prof Rajnish Mehrotra & Prof Edwina Brown
Meeting with Malaysia Health Minister
2 September 2025



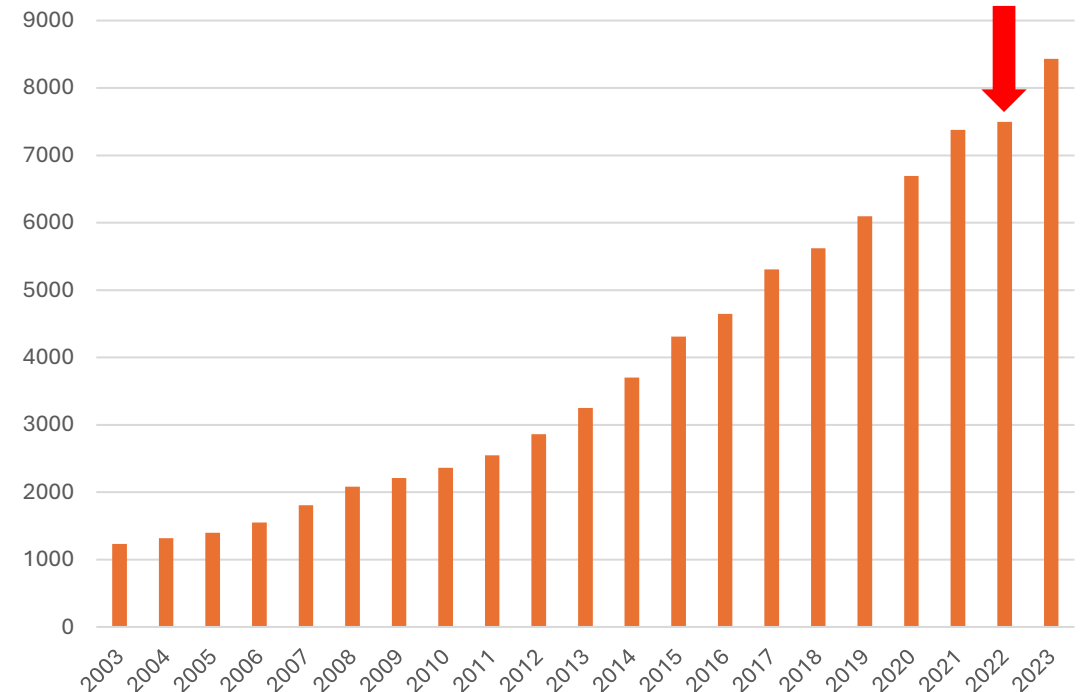
Increase Home Dialysis: PD First Policy in Ministry of Health



Number of new KRT patients by modality (1990-2024)



PD first policy in MOH



- No new HD units being built in community
- **Cost implication: Reduction in estimated dialysis expenditure about RM 500,000,000 - RM 664,000,000 in 2025 as compared to building a new HD unit**

MyKidney Health 2030



01

To decrease
Diabetic Kidney Disease
to ESKD by 10%

02

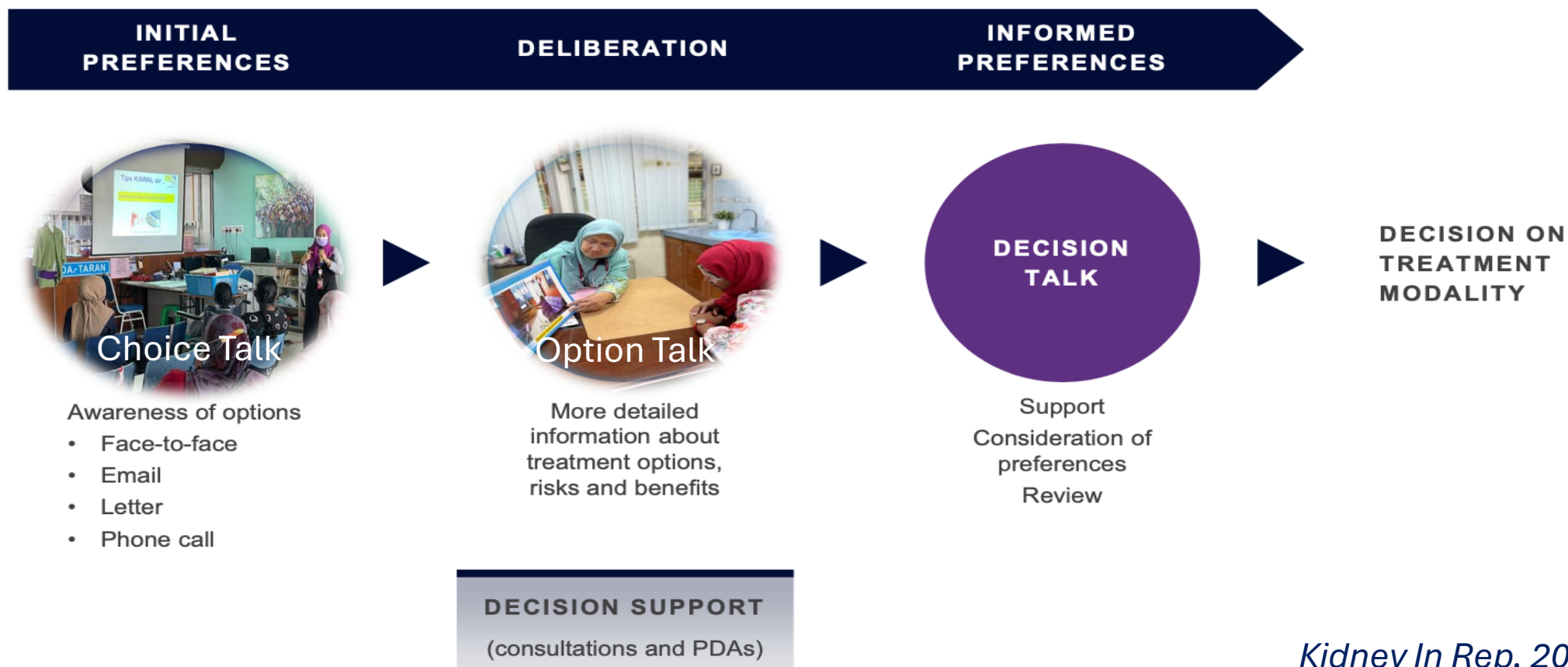
To increase home dialysis
(peritoneal dialysis &
hemodialysis) in incident
ESKD to 30%

03

To increase kidney
transplant to
10 per 1000
dialysis population

Shared Decision-Making for a Dialysis Modality

Xueqing Yu¹, Masaaki Nakayama², Mai-Szu Wu^{3,4}, Yong-Lim Kim⁵, Lily Mushahar⁶, Cheuk Chun Szeto⁷, Dori Schatell⁸, Fredric O. Finkelstein⁹, Robert R. Quinn¹⁰ and Michelle Duddington¹¹



Invest in workforce training and nurse-led programs:

- PD basic & masterclass workshops
- PD access workshop
- Continuous Quality Initiatives (CQI) workshop



Collaboration/partnership and support programs:

- ISN Sister Renal Centre program
- ISPD Fellowship & Scholarship program
- ASNZ-ISN 5-year strategic planning in Pacific Island countries

Developing a strong PD team & “PD champions”



PD Quality Standard, Operating Procedure & Guidelines

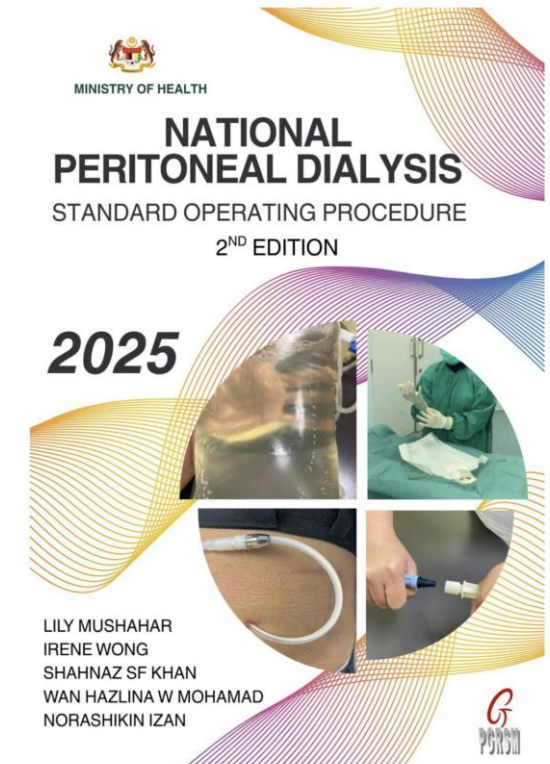
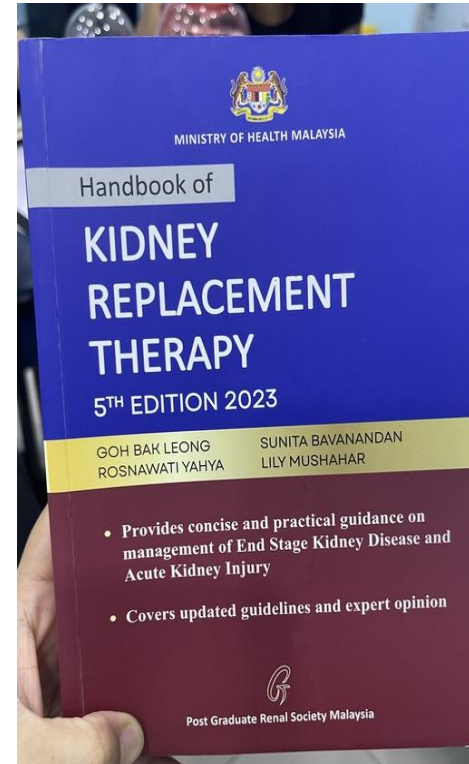


ISPD peritonitis guideline recommendations: 2022 update on prevention and treatment

Philip Kam-Tao Li^{1,2}, Kai Ming Chow^{1,2}, Yeoungjee Cho^{3,4}, Stanley Fan⁵, Ana E Figueiredo⁶, Tess Harris⁷, Talerngsak Kanjanabuch^{8,9}, Yong-Lim Kim¹⁰, Magdalena Madero¹¹, Jolanta Malyszko¹², Rajnish Mehrotra¹³, Ikechi G Okpechi¹⁴, Jeff Perl¹⁵, Beth Piraino¹⁶, Naomi Runnegar¹⁷, Isaac Teitelbaum¹⁸, Jennifer Ka-Wah Wong¹⁹, Xueqing Yu^{20,21} and David W Johnson^{3,4}

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SAGE

Reducing complications
rate for PD (reduce
added costs of
hospitalization)



Malaysia PD Quality Standard, Operating Procedure & Guidelines

Local PD manufacturer

- “Non-monopoly” of PD supplies & efficient PD procurement process
- Use “bulk” procurement methods



Vantive/Baxter Singapore



Peritone Malaysia



Fresenius Medical Care Malaysia

Increase PD awareness & Develop PD Patient Advocacy



See insights and ads

Boost post

310

71 comments 123 shares



- Mr Chee See Soon
- Movie and Theatre Actor
- CAPD for 16 years
- 2 episodes of peritonitis

To provide message of PD-first or PD favored
policy of government



International Home Dialysis Consortium Manifesto

All forms of kidney replacement therapy (KRT) are potentially lifesaving, and a key priority for all countries should be to ensure that KRT is available and affordable for everyone with kidney failure. However, to those who already have access to KRT, home dialysis has special advantages. Providing home dialysis (peritoneal dialysis and home haemodialysis) holds the promise of enhancing patient experience, quality, and equity in kidney failure care by allowing wider global access to kidney replacement therapies.

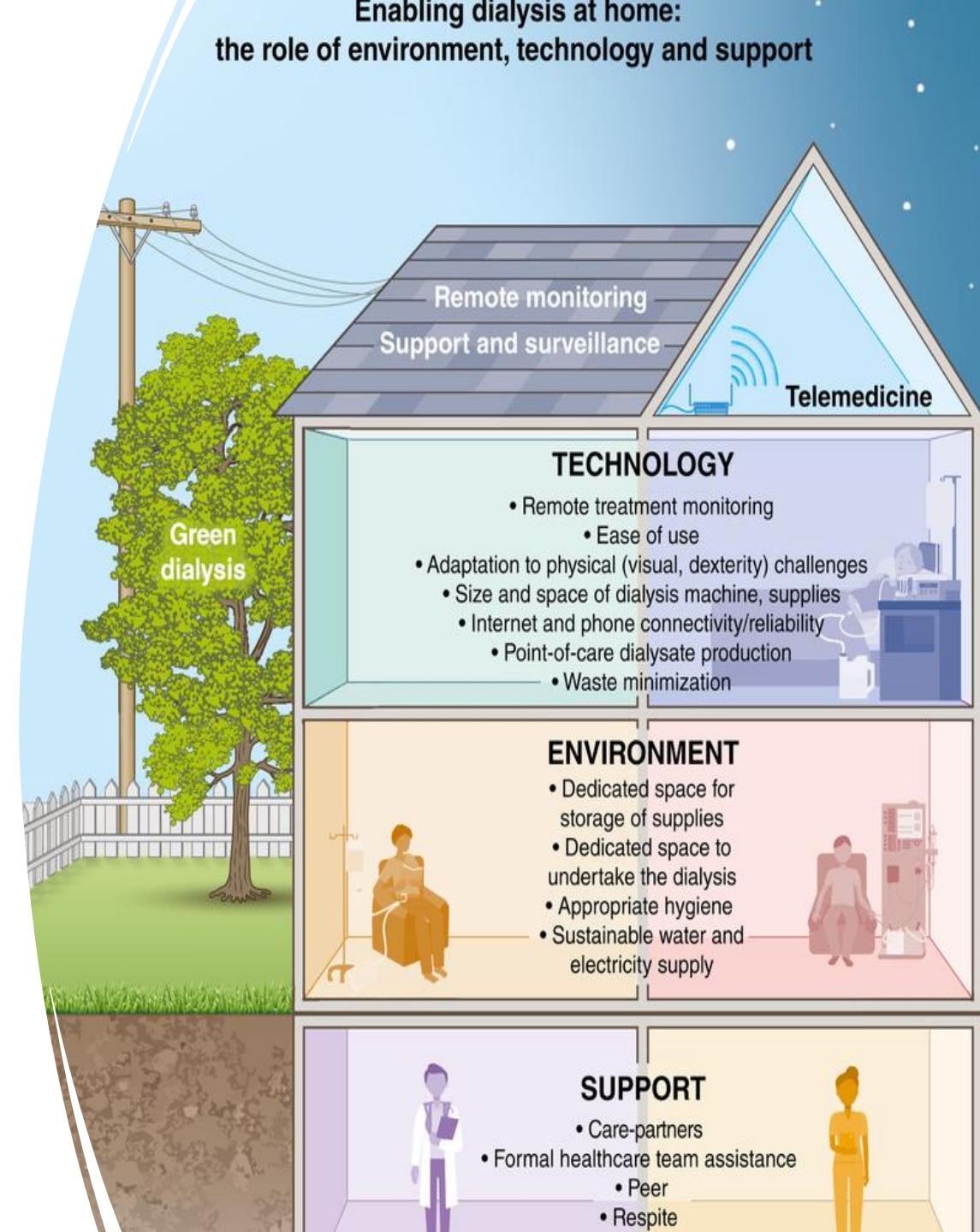
Scale remote-monitoring & telemedicine for home APD

- Remote patient management can reduce hospital visits and improve technique outcomes-making PD more practical for dispersed populations

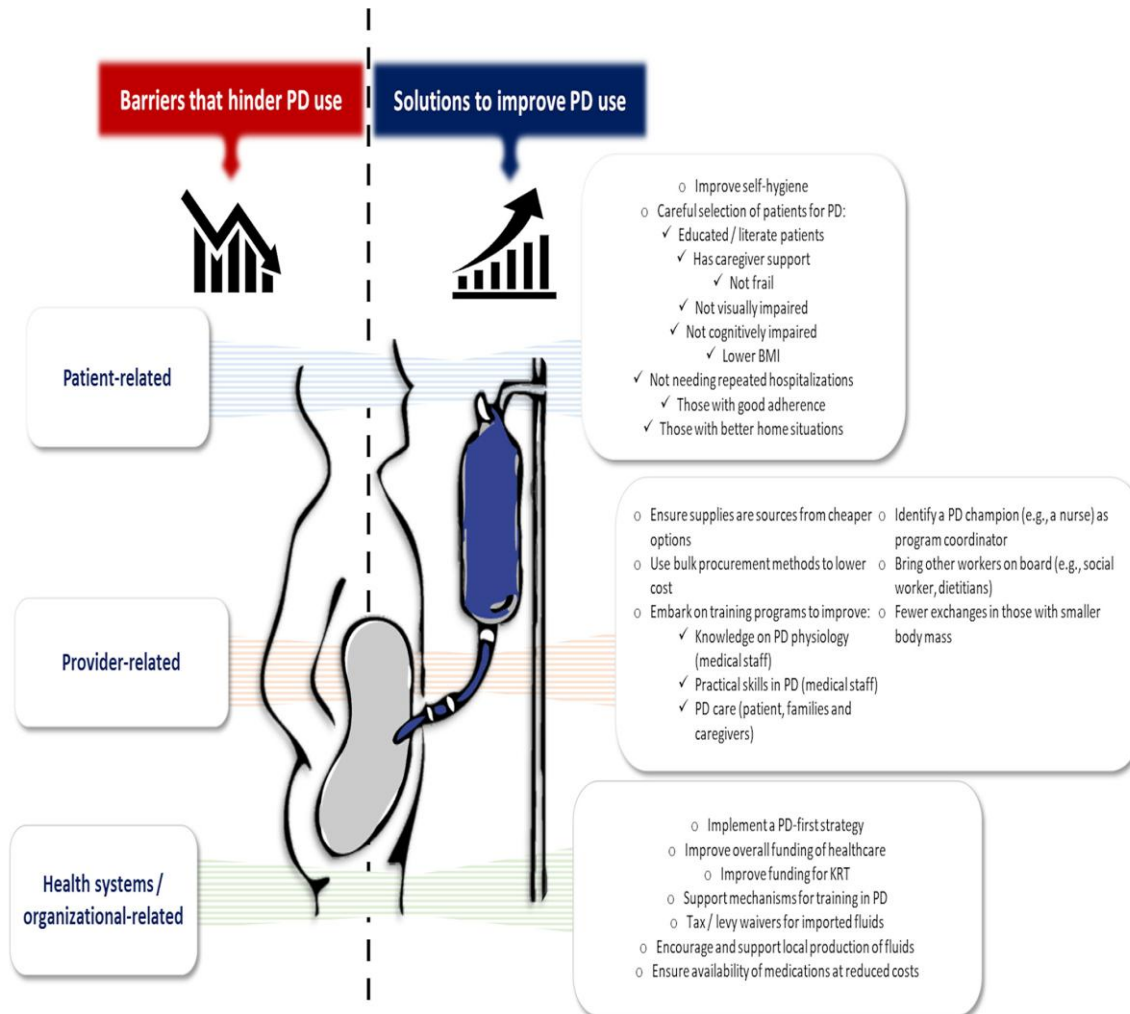
Green nephrology

- Recycling program of PD bags

Kidney Int 2023, 103(5)



Conclusion



Opportunities:

- Adopt or "adapt" PD first or PD-favored policies where feasible
- Reform financing to remove PD disincentives – "bundle payment"
- Build regional procurement + PD registry
- Increase PD awareness among HCP and patients. Develop country PD champion
- APD remote monitoring & telemedicine
- Green nephrology



Thank You