ISPD Asia-Pacific Chapter Newsletter, August 2025

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Prepared by Chia-Te Liao and Talerngsak Kanjanabuch

News from the ISPD

Message from ISPD-APC Chapter Convenor

Professor Talerngsak Kanjanabuch, M.D.

As the ISPD Asia-Pacific Chapter advances its shared vision of strengthening PD across the region, I warmly invite you to remain engaged and inspired by the momentum we are building together. The 11th ISPD-APCM 2025, to be held from 3 to 7 September in Kuala Lumpur, promises to be a dynamic convergence of expertise, innovation, and collaboration under the theme ***"Transforming and Empowering Success in PD."*** With over 400 abstracts submitted and international delegate numbers steadily rising, the meeting is poised to offer a truly enriching experience. I encourage you to share this opportunity widely, take advantage of group registration—available until 24 August—and bring your team's energy to the ever-popular PD Jeopardy Quiz, which remains open for new participants. Our commitment to equitable access is reflected in the enthusiastic response to the **ISPD-APC Travel Grant Program**, which received 55 applications from 14 countries. In response, we have expanded the grant budget to USD 12,000, enabling support for up to 15 early-career professionals, with particular attention to those from low- and lower-middle-income countries—while remaining mindful of broader regional needs where impact is clear. It also gives me great pleasure to congratulate **Dr. Rubash Nath Yogi** from Nepal and **Dr. Qiqi Yan** from China, recipients of the ISPD-APC Fellowship Scholarship (Round 1). Their upcoming training at leading PD centers will not only advance their clinical growth but also strengthen the spirit of collaboration that defines our Chapter.

Looking ahead, we are preparing to select the host country for ISPD-APCM 2027, which will mark the 25th anniversary of the ISPD Asia-Pacific Chapter. Proposals have been received from Indonesia and South Korea, and we look forward to announcing the host in due course following a fair and thoughtful selection process. Let us continue to grow a resilient, inclusive, and forward-looking PD community—anchored in knowledge, collaboration, and a shared commitment to excellence. I look forward to seeing many of you in Kuala Lumpur this September.

Talerngsak Kanjanabuch, M.D.
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ISPD-APC Chapter Convenor and ISPD Council Member

ISPD at the 2025 CSN Critical Care and Blood Purification Congress (CCBPC) in Tianjin (China)

Our President, Dr Rajnish Mehrotra, had the honour of participating as guest speaker at the 2025 edition of the CCBPC (Critical Care and Blood Purification Congress), which took place in early July in Tianjin, China. This event was organised by the Chinese Society of Nephrology (CSN).

This congress was not only a high-level scientific meeting, but it was also an excellent opportunity for the ISPD President to meet with the CSN leaders and the PD enthusiasts in the region. China now has over 150,000 patients on PD, but this impressive number comes with big challenges that need to be addressed if the growth is to be sustainable. The ISPD commits to continue the collaboration with the CSN to overcome these challenges, for instance, by encouraging and supporting the translation of our Guidelines into Chinese, ensuring that the Chinese healthcare professionals have access to the latest evidence-based recommendations and can provide the best care for their patients.

We are extremely thankful to the CSN and its leadership for their kindness and hospitality. We are hopeful we will continue cooperating and expand our collaboration in the upcoming months.

ISPD Asia-Pacific Chapter Scholarship Application

This is a scholarship to support **up to 3 months** training in clinical PD for doctors and nurses from Asia-Pacific region. The purpose is to promote PD awareness, knowledge, and expertise by visiting a center of excellence.

Applicants must be **ISPD members**.

- For medical applicants, candidates who have completed their nephrology training and with some working experience as a junior consultant would be preferred.

- For applicants of other healthcare professionals, candidates who have a working experience of at least 5 years would be preferred.

Each application must include the following documents: (1) A completed application form along with (2) a curriculum vitae, (3) a recommendation letter from the director of the nephrology unit or department, (4) a letter of acceptance from the institution to be visited; and (5) a motivation letter.

A letter of support from the administrator of the applicant's institution is advisable.

Deadline for application for each round: twice a year at 30 June or 31 December.

The next deadline is **31 December 2025.**

Details and application procedures can be found under the Regional Chapters – Asia-Pacific Chapter, at the ISPD website. Asia-Pacific Chapter - International Society for Peritoneal Dialysis

ISPD Fellowship Application

The **ISPD Scholarship and Awards Committee** is now accepting applications for the second round of ISPD Fellowships for 2025.

The deadline for applications is **30 September 2025**.

Each year, the ISPD offers funding to support **12 individuals (nephrologists) or teams (nephrologist and nurse from the same center)** to travel abroad and receive advanced training at one of the prestigious Reference Centers in our network.

There are two modalities for application available:

Individual Fellowships: Selected individuals will receive **up to $5000 USD** to cover travel and accommodation expenses.

Team Fellowships: Selected teams will receive **up to $9000 USD** to cover their costs.

In the first call of 2025, we already selected 6 fellows, so we will have 6 fellowships available for this second call. Visit the ISPD Fellowships Application Page for detailed information, including eligibility criteria, application instructions, and a link to download the application form.

Please share this information with other colleagues who may be eligible. Please note that you do not need to be an ISPD member to apply. In addition, all selected ISPD Fellows will receive a 1-year complimentary ISPD membership upon completion of their fellowship.

If your Hospital/Center would like to be included in the List of Reference ISPD Fellowship Centers, please contact our office at admin@ispd.org.

Call for Expressions of Interest for new PDI Editor-in-Chief

Peritoneal Dialysis International is currently seeking expressions of interest for a new **Editor in Chief**. The current Editor, Jeffrey Perl (St Michael's Hospital & University of Toronto, Canada), is seeking to hand over editorship after several years leading the journal forward.

The new Editor in Chief (EIC) should bring in a distinctive vision for the future of the journal, to build on this past success to take the journal forward. The new EIC will work closely with the current EIC for a transition period, and will have the support of the PDI Editorial Board, a support team from SAGE, the journal's publisher, and administrative support from the ISPD secretariat.

We are seeking expressions of interest from individuals with a strong track record in scholarship in peritoneal dialysis, including clinical management research, as well as expertise in editing and reviewing. Editors should have a post-graduate degree, substantial prior experience in an editorial role, and an established background in academic writing and publication. These roles require excellent management and organizational skills and the ability to work with an online submission management system and the staff at SAGE.

The Editor in Chief will work under the oversight of the ISPD Publication Committee on publishing matters and is ultimately answerable to the ISPD Council. More details on the role of the Editor in Chief can be found in the complete call, under the annex: Editorial Responsibilities.

We are seeking energetic, passionate scholars who will make the journal a priority and seek to further build its profile, reach, and impact.

- **Time commitment:** This role requires roughly up to 6 hours of work per week, requiring at least some of that time to be committed on a day-to-day basis in order to keep on top of practical aspects.
- **Start date:** The handover period will take place in the first half of 2026.

The EIC will be provided a stipend as a recognition of their work, and they will also be provided with support for travel to Editorial meetings

For more information, please check the Call for Expressions of Interest HERE.

Renew your membership!

A quick reminder of the different membership options for staying connected to the ISPD

Individual memberships

- For Trainees and Fellows: A very discounted membership for USD $60 per year.
- For Doctors: Full membership for one year costs USD $175, but there are great discounts for 2- and 3-year membership packages.
- For Nurses/AHPs: Full membership for one year costs USD $100, and there are also discounted packages for 2- and 3-year membership packages.

  - An Associate Nurse/AHP option is also available for $15 USD per year (with limited benefits).
- Retired Professionals can enjoy a discounted membership for $80 USD per year.

Group memberships

- Society Membership: Your national society can contact the ISPD and negotiate a discounted price for groups of members.
- Institutional/Collective memberships: in low and middle income countries, groups of up to 10 members can join in a combined membership for only USD $175.

Visit https://ispd.org/memberships/ to join the ISPD or renew your membership.

Membership benefits of the ISPD include:

- Subscription to Peritoneal Dialysis International
- ISPD Newsletter sent every two months
- Direct access to all ISPD Educational materials: ISPD Guidelines, Webinars, Journal Clubs, Case Discussions…
- Special registration fees at ISPD events, including the ISPD APC Meeting in September 2025 in Kuala Lumpur
- Opportunity to apply for ISPD Scholarships and Grants

Upcoming Meetings

11th ISPD Asia Pacific Chapter Meeting 2025

Dear Colleagues,

Warm greetings from the **APCM-ISPD & MSN 2025 congress** Organising Committee.

As the congress is approaching nearer, we are excited to welcome you to Kuala Lumpur for a productive and enriching experience meeting. We are pleased to extend a ***discounted group registration rate*** to delegates from Asia Pacific and International nephrology societies. Society members that register a minimum of 5 or more will receive this special registration fees. This special rate is not applicable for pre-congress events.
To receive this special offer, please scan the QR code to complete and submit the registration form ***by or before Sunday, 4 August 2025***.
Please take the opportunity to visit Kuala Lumpur city and other must-see sights and attractions in Malaysia. We look forward to welcome you for an impactful and collaborative congress!

Sincerely,

Dr Lily Mushahar
Congress & Scientific Chair

Prof Lim Soo Kun
Congress Co-chair & MSN President

23rd Asian Pacific Congress of Nephrology 2025 (endorsed by ISPD)

5-7 December 2025

Early Registration Deadline: 30 September 2025

TaiNEX2, Taipei, Taiwan

More information: APCN x TSN (www.apcn2025.org)

Guideline Update

Key Strategies from the 2024 ISPD Guidelines to Manage PD-Associated Peritonitis in Children

ISPD-APC Newsletter | August 2025 Edition – Part 2

From left to right: A/Prof. Angkanee Chanakul [1], A/Prof. Theerachai Thammathiwat [2], Professor Talerngsak Kanjanabuch [3], and Professor Bradley A. Warady [4]

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Introduction

Following the prevention-focused strategies outlined in the April 2025 ISPD-APC Newsletter (**Part 1**), this second installment addresses the **diagnosis and clinical management** of peritoneal dialysis (PD)-associated peritonitis in pediatric patients. As emphasized in the 2024 ISPD Clinical Practice Guidelines (*Peritoneal Dial Int* 2024; 44[5]:303–364), early recognition, targeted antimicrobial therapy, and timely decision-making regarding catheter retention or removal are central to effective care. This summary translates these recommendations into a structured and adaptable clinical framework tailored to pediatric PD programs across the Asia-Pacific region.

Guideline 8 – Diagnosis of PD-Associated Peritonitis

Diagnosis should be established when at least two of the following are present:

- Cloudy dialysate with **>100 WBC/mm³** and **>50% PMNs**,
- Clinical symptoms (e.g., fever or abdominal pain),
- Positive dialysate culture.

For patients on automated PD (APD) without a daytime dwell, even lower leukocyte counts with neutrophil predominance may indicate early infection. Inoculation of blood culture bottles with PD effluent obtained after a **≥2-hour dwell** may improve microbial recovery. When the clinical picture is unclear, repeat analysis is essential.

Guidelines 9–12 – Empiric and Pathogen-Specific Antimicrobial Therapy

Empiric Therapy (Guideline 9)

Antibiotics should be initiated **immediately** after specimen collection. Recommended regimens:

- **Monotherapy**: Intraperitoneal (IP) cefepime
- **Combination therapy**: Vancomycin or cefazolin **plus** ceftazidime (preferred over aminoglycosides).

Vancomycin is reserved for patients with prior MRSA or in endemic settings. Intravenous antibiotics are reserved for septic patients.

Principles of Therapy (Guideline 10)

Antibiotics should be narrowed based on culture results, optimizing efficacy while minimizing the risk for resistance and toxicity. IP delivery is preferred for local effect.

Gram-Positive Peritonitis (Guideline 11)

Coagulase-negative Staphylococci (CoNS), *S. aureus*, *Enterococcus spp.*, and *Streptococcus spp.* are the most common pathogens. IP cefazolin is effective for MSSA; vancomycin is used for MRSA or ampicillin-resistant strains. Most cases require **2 weeks** of therapy.

Gram-Negative Peritonitis (Guideline 12)

Organisms such as *Pseudomonas*, *Acinetobacter*, and *ESBL-producing Enterobacterales* are associated with more severe outcomes. Duration:

- **2 weeks** for uncomplicated cases,
- **3 weeks** for difficult to treat (e.g., *Pseudomonas*) and multidrug-resistant organisms.

Antibiotic selection should be guided by local resistance patterns and susceptibility testing. (*Diagram 1*)

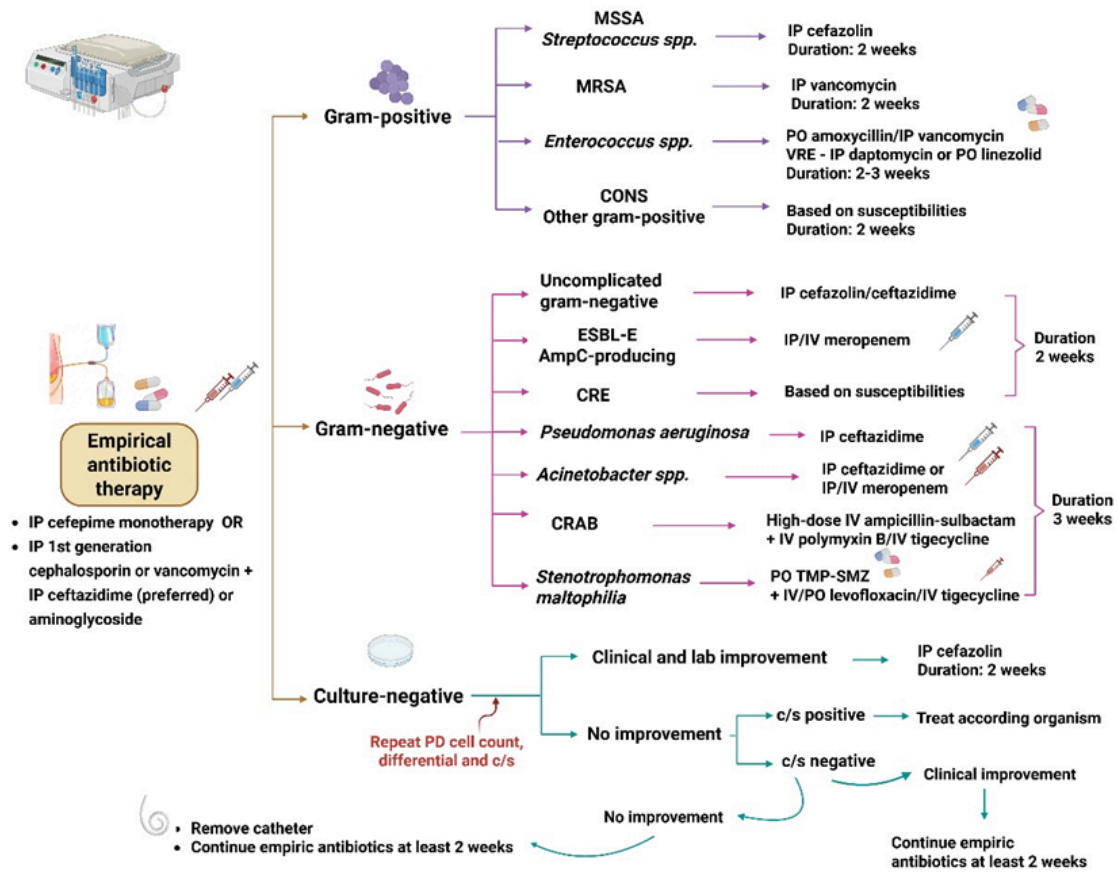

Diagram 1: Peritonitis Management Flowchart

Guidelines 13–15 –Peritonitis in Special Situation

Culture-Negative (Guideline 13)

Treat empirically for 14 days. If the patient improves and cultures remain negative after 72 hours, narrow to cefazolin monotherapy. If symptoms persist beyond **5 days**, consider fungal, mycobacterial, or resistant organisms—and catheter removal.

Fungal Peritonitis (Guideline 14)

Immediate catheter removal is **mandatory**. Oral fluconazole is preferred for *Candida* spp.; alternatives (e.g., voriconazole, amphotericin B) are used based on susceptibility. IP antifungals are discouraged due to toxicity and poor efficacy. Treatment continues for at least **2 weeks** after catheter removal.

Mycobacterial Peritonitis (Guideline 15)

- **Tuberculosis (TB)**: Rare but severe. Empiric anti-TB therapy should be considered in endemic regions.
- **Non-Tuberculous Mycobacteria (NTM)**: Often presents as refractory, culture-negative peritonitis. Catheter removal is required. These organisms are generally resistant to first-line TB drugs, with amikacin often being the only effective agent.

Relapsing, Recurrent, Repeat, and Non-Repeat Peritonitis (Guideline 16)

Defined as: (*Diagram 2)*

- **Relapsing**: Within 4 weeks, same organism.
- **Recurrent**: Within 4 weeks, different organism.
- **Repeat**: After 4 weeks, same organism.
- **NonRepeat**: After 4 weeks, different organism

Empiric therapy should consider previous pathogens. Catheter replacement is **strongly recommended** in cases involving *S. aureus*, *Pseudomonas*, tunnel infections, abscesses, or repeated relapsing episodes.

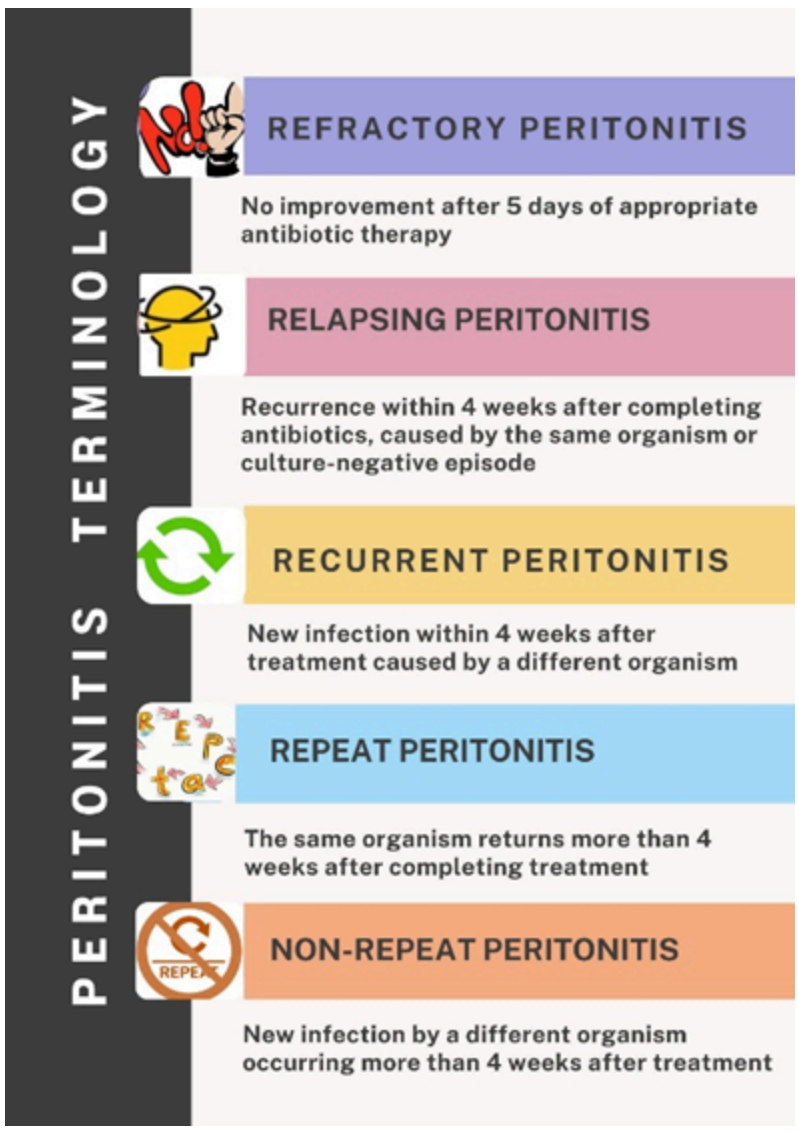

Diagram 2: Peritonitis Definitions

Guideline 17 – Adjunctive Therapies

Adjunctive measures may improve outcomes in select cases:

- **IVIG** for patients with hypogammaglobulinemia and recurrent infections.
- **Fibrinolytics** (e.g., urokinase) in first relapsing episodes without fungal infection or tunnel abscess.
- **IP Heparin** to prevent catheter occlusion (500 units/L).
- **Low fill volumes** in the first 48 hours for pain control.
- **Icodextrin** during acute inflammation to support ultrafiltration.
- **Topical silver nitrate** for non-infected granulation tissue at PD catheter exit site.

Guideline 18 – Catheter Removal and Reinsertion

If there is **no improvement by day 5** of appropriate antibiotics, catheter removal should be considered. Indications include refractory peritonitis and an exit-site/tunnel infection-associated with peritonitis caused by the same organism.

Catheter reinsertion should be delayed by **2–3 weeks** post-resolution of fungal and refractory bacterial peritonitis. Simultaneous removal/reinsertion may be performed in select, stable cases. (*Diagram 3*)

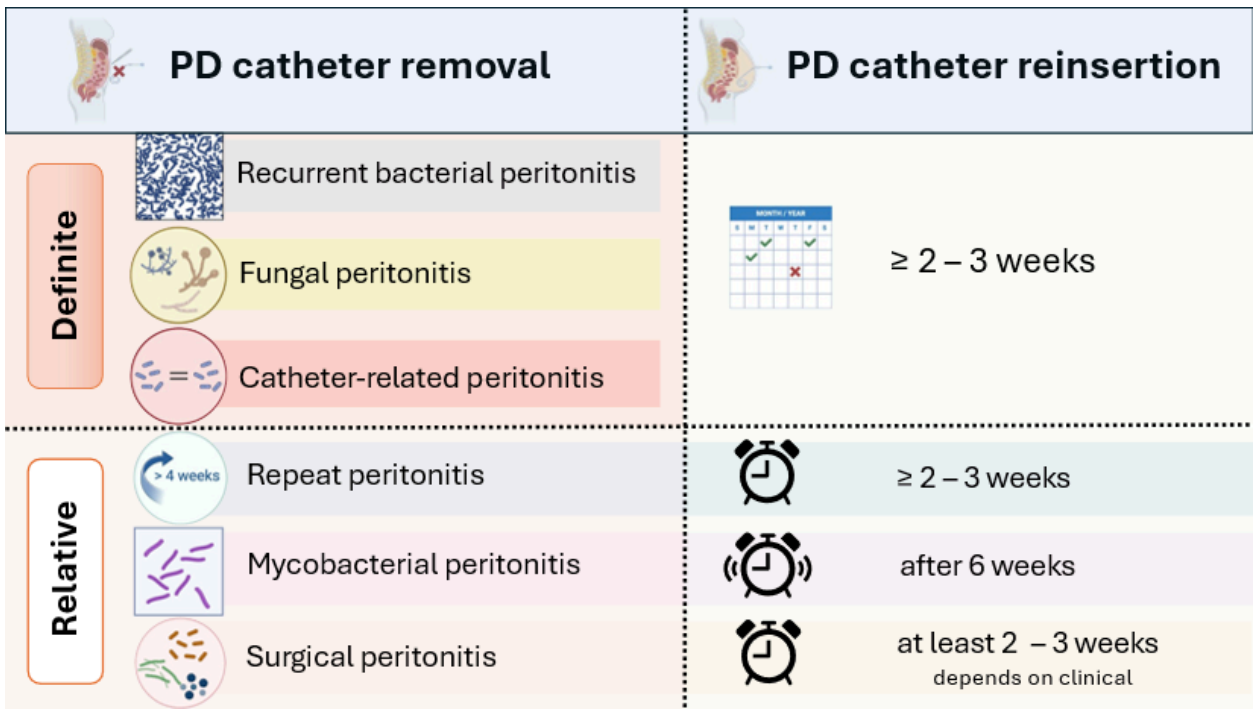

Diagram 3: Indications for PD Catheter Removal and Reinsertion

Guidelines 19–20 – Catheter-Related Infections

An objective scoring tool should be used to monitor exit-site status.

- **Exit-site infection**: Defined by purulent discharge at the catheter-skin interface.
- **Tunnel infection**: Redness, tenderness, or fluid collection along the subcutaneous tract.

First-line therapy includes oral first-generation cephalosporins. MRSA or *Pseudomonas* require vancomycin or antipseudomonal agents.

Duration:

- **7–14 days** for most organisms
- **≥3 weeks** for *Pseudomonas* or tunnel infections

Refractory infections progressing to peritonitis necessitate catheter removal.

Guidelines 21–22 – Response Evaluation and Quality Monitoring

Response Assessment (Guideline 21)

Monitor improvement via effluent clarity and WBC count at 72 hours. Persistent turbidity or elevated WBCs suggests treatment failure.

Infection Surveillance (Guideline 22)

PD programs must maintain robust tracking systems. Key quality targets:

- Peritonitis rate: **<0.4 episodes per patient-year**
- Culture-negative rate: **<15%**
- Peritonitis <30 days post-insertion: **<5%**

An apparent cause analysis should follow each episode to identify preventable factors.

Conclusion

The 2024 ISPD Guidelines for pediatric peritonitis provide a structured, evidence-based approach to diagnosis, therapy, and catheter management. For clinicians across the Asia-Pacific region, consistent implementation of these recommendations can improve technique survival, reduce morbidity, and support safer PD for children with kidney failure. Integration of these strategies—tailored to local settings and supported by continuous monitoring—will drive meaningful, sustainable improvements in pediatric dialysis care.

Acknowledgements

Special thanks to Theerachai Thammathiwat, M.D., and Nattapong Srihong, B.Sc., for their outstanding work in designing Figure 1 using BioRender and an Image Generator.

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Update from the ISPD Standards and Guidelines Committee

Chair – Josephine Chow (Australia)
Members – Kai Ming Chow (Hong Kong), Rafael Alberto Gomez (Colombia), Geraldine Endall (UK), and Matthew Rivara (USA)

It has been truly encouraging to witness the recent expressions of interest (EOIs) to join the Guideline /Position Paper Development Working Groups, especially with the launch of the first-ever EOI process for ISPD guideline development. Currently, five guidelines are either being developed or updated, with one already submitted to ***Peritoneal Dialysis International (PDI)*** and two more scheduled for submission in the coming months.

The ISPD Executive Committee and the Standards and Guidelines Committee are actively working to translate guidelines and position papers into multiple languages, aiming to enhance the global dissemination and accessibility of evidence-based practices.

List of Guidelines / Position Paper in development:

Guideline / Position Paper	Lead (s)
**Nutritional Management of Patients Undergoing PD	Angela Wang
Transfer to In-Center Haemodialysis	Rob Quinn & Mark Lambie
**Teaching Peritoneal Dialysis: A Position Paper for the ISPD	Josephine Chow
ISPD Cardiovascular and Metabolic Guidelines in Adult PD Patients: 2025 Update	Kai Mai Chow & Gillian Brunier
**ISPD Sustainable PD: A Position Paper	Benjamin Talbot & Winston Fung

** Position Paper

Research News from Asia-Pacific Region

Incremental Peritoneal Dialysis in the Asia-Pacific: Lessons from an Australian Cost Analysis

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Introduction

The burden of kidney failure is increasing across the Asia-Pacific region, where healthcare systems face funding constraints and disparities in access to dialysis services [1]. Incremental peritoneal dialysis (PD), a patient-centred approach that begins with fewer exchanges and escalated as needed, offers a cost-effective, flexible alternative to conventional full-dose regimens [2]. Our recently published Australian cost-analysis found that incremental PD reduced mean monthly outpatient costs by AUS $339 (95% CI: $152 to $526, p <.001) compared to full-dose PD, primarily driven by lower consumable use [2]. This article explores how adopting incremental PD can help deliver access to kidney replacement therapy in India, the Philippines and Thailand, each with distinct healthcare financing structures.

Barriers to PD Uptake

Despite being more cost-effective than in-centre haemodialysis, delivering 10-30% savings in several Asia-Pacific countries [3], PD remains underutilised. The annual median cost of PD is approximately USD $18,959, increasing to USD $30,064 in low-income settings, where patients often pay out-of-pocket or rely on fragmented public funding [4]. Contributing factors include high fluid costs, limited local production of fluids and consumables, and inadequate provider training [1]. Full-dose regimens, while clinically effective, can cause financial hardship, disrupt employment, and restrict participation in family and community life [5].

Country perspectives

Australia

In our study, incremental PD regimens, comprising of two-three daily 2-litre continuous ambulatory PD exchanges or three 1.8-litre automated PD cycles per day reduced direct hospital costs by AUD $138 to $572 per month, compared to full dose therapy. They also provided substantial dialysis-free time, with dwell time reduced by 9 to 17 hours and exchange procedure time shortened by 45 to 135 minutes per day, allowing patients to engage in their social and work activities.

A 2-exchange-per-day regimen is used here as a reference to illustrate potential cost savings in India, the Philippines and Thailand.

India

India has approximately 220,000 incident cases of kidney failure annually, with nearly 94% of patients receiving haemodialysis and only 6% receiving PD [6, 7]. Although public insurance schemes such as the Pradhan Mantri Arogya Yojana (PMJAY) are expanding dialysis coverage to people below the poverty line, uptake of PD remains limited. From a societal perspective, a PD-first strategy is cost-favourable, but its long-term viability depends on reducing the cost of consumables, which are typically borne by patients [7, 8]. In India, the average monthly household income is approximately ₹14,900 (USD ~$180). Despite the local production of PD fluids and consumables, a full-dose PD regimen costing ₹21,000 per month exceeds the average monthly income, amounting to 105% of household earnings. In contrast, reducing the prescription to two exchanges per day lowers this cost to about ₹10,500, or 53% of monthly income [9, 10]. This stepwise approach may help bridge affordability gaps and free up resources for food or medications, as national programs continue to evolve.

The Philippines

PD accounts for only 0.6% of dialysis patients in the Philippines [11]. Most patients receive haemodialysis in private centres, as PD uptake remains constrained by high out-of-pocket costs, and limited accredited facilities [12]. In 2024, the Philippine Health Insurance Corporation (PhilHealth) introduced a PD-first initiative, offering bundled quarterly payments for PD consumables, medications and training [12]. Incremental PD may facilitate this transition by reducing daily consumable requirements and lowering treatment costs.

A full-dose PD regimen in the Philippines costs approximately ₱21,000 per month, while reducing to two exchanges per day lowers costs to ₱10,500 [13]. For a minimum wage earner in Metro Manila earning ₱14,190 per month (USD $250), full-dose PD consumes nearly 148% of monthly income, while an incremental regimen reduces this burden to about 74% [11]. Though still substantial, this cost is more manageable and may enable earlier PD access for low-income patients. Moreover, incremental PD may allow families to redirect funds towards essentials like rent or utilities as national coverage expands.

Thailand

Thailand's Universal Coverage Scheme (USC) offers a robust 'PD First' program, with government funded catheter insertion, consumables, medications, and home delivery [14]. Centralised procurement through the Government Pharmaceutical Organization ensures price stability and uninterrupted supply, while nationwide delivery is efficiently managed by Thailand Post. Certified PD nurses conduct regular home visits and retraining, contributing to high retention and clinical success [14].

Incremental PD aligns well with Thailand's established PD infrastructure and presents a valuable opportunity to optimise public resources. Although the UCS currently supports full-dose PD as the standard regimen, initiating suitable patients on two-three daily exchanges could expand access within existing budget constraints. Savings from reduced consumables use may be redirected to broaden PD coverage, reinforce the PD nursing workforce, or support hospital services-helping to ease fiscal pressures on the national health system.

Reflections and Discussion

Our findings underscore that consumables are the dominant cost driver in PD-and that incremental prescriptions can deliver significant savings without compromising outcomes. This depends on structured patient selection, regular monitoring, and timely dose escalation.

The increasing burden of kidney failure across the Asia-Pacific highlights the need for clinically and financially viable models. Australia, India, the Philippines, and Thailand represent four distinct health system contexts where incremental PD may expand dialysis access—by lowering out-of-pocket costs, supporting phased policy implementation, and extending budgetary reach of public funding. Across all settings, the significant increase in dialysis-free time observed in our study highlights incremental PD's potential to improve life participation, including paid employment and reduce financial hardships for patients and families.

While funding structures differ across countries and standard PD regimens may consist of fewer than four daily exchanges, reducing the number of exchanges still yields meaningful savings, whether costs are borne by governments or households. However, the benefit of incremental PD relies on structured implementation. Clinical suitability, regular monitoring, and timely dose escalation are not optional features but essential to incremental prescribing.

Conclusion

Incremental PD is a scalable, patient-centred solution to enhance the affordability and accessibility of dialysis across Asia-Pacific. When grounded in systematic protocols and clinical oversight, it supports systems to stretch limited resources, reduce patient burden, and improve quality of life. As shown through examples in Australia, India, the Philippines, and Thailand, it holds promise to make PD more accessible.

Acknowledgments

We thank the following experts: Dr. Kamal Sud, Dr. Talerngsak Kanjanabuch, Dr. Donnah Franceska De Leon, and Dr. Rizza Antoinette Y. So, for reviewing the sections related to India, the Philippines, and Thailand. Their insights into PD provision in each country were invaluable in ensuring the contextual accuracy and relevance of this article.

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Weekly Chlorhexidine Dressings for Catheter Exit-Site Care in Hospitalized Peritoneal Dialysis Patients: A Quality Improvement Project

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Peritoneal dialysis (PD) catheter exit-site care is crucial for preventing infections [1], but practices vary globally. At Singapore General Hospital, the standard protocol for hospitalized patients previously involved daily cleaning with povidone-iodine and application of topical antibiotics. While effective, this method is labour-intensive and increasingly difficult to sustain due to growing PD patient volumes and ongoing nursing workforce constraints. In response to the COVID-19 surge and staffing constraints, the hospital launched a Quality Improvement (QI) project in August 2021, introducing weekly chlorhexidine-impregnated sponge dressings as an alternative. Chlorhexidine, known for its broad-spectrum antimicrobial activity [2], has demonstrated effectiveness in reducing catheter-related bloodstream infections in patients with central venous catheters [3].

This quality improvement initiative was conducted at Singapore General Hospital, Singapore, from August 2021 to February 2022, during a surge in COVID-19-related admissions, including patients on peritoneal dialysis (PD) [4]. The project aimed to reduce nursing workload by replacing the conventional daily exit-site dressing protocol with a weekly chlorhexidine-impregnated sponge dressing. The new protocol included cleaning of the PD catheter exit site with a 10% povidone-iodine swab stick, drying with sterile gauze, followed by the application of a chlorhexidine-impregnated sponge (2.5 cm × 0.7 cm, containing approximately 86.8 mg chlorhexidine gluconate), secured with a transparent dressing (Tegaderm™ 3M I.V. Advanced) (Figure 1). This dressing was changed weekly.

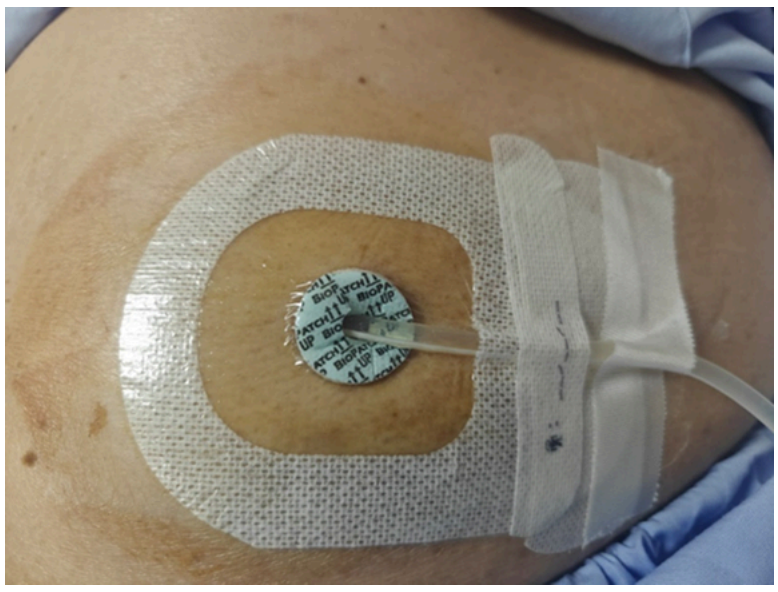

Figure 1. Application of Chlorhexidine-Impregnated Dressing for Exit-Site Care in a Peritoneal Dialysis Patient.

The PDSA cycle involved training PD nurses on the use of weekly chlorhexidine dressings and implementing the protocol for eligible inpatients. Weekly dressings were applied to all hospitalized PD patients unless they had specific exclusions, such as known allergy to chlorhexidine, active exit-site infection, recent catheter insertion (within two weeks), exit-site bleeding or leakage, or refusal of the intervention. The project targeted a 50% reduction in nursing time spent on exit-site care over the six months [4]. Nursing time and hospital stay were tracked, while infection and dermatitis rates were monitored as balancing measures. Dressings were applied per protocol, with consistent documentation, and outcomes were analysed.

Nursing time was estimated based on 10 minutes per dressing. Cost analysis was performed using estimated non-subsidized costs: S$ 20 per conventional dressing and S$ 30 per chlorhexidine dressing. Total time and cost savings were calculated by comparing actual usage of chlorhexidine dressings against projected figures for daily traditional dressings. Descriptive statistics were used to compare the median time spent on dressing changes before and after implementation.

Before the QI initiative, PD nurses spent a median of 104.9 minutes per patient per month on exit-site care using daily antibiotic dressings. After implementing the weekly chlorhexidine dressing protocol, nursing time was significantly reduced to 31.3 minutes per patient per month, achieving a 70% reduction of nursing time on dressing change.

From August 2021 to February 2022, 211 PD patients received weekly chlorhexidine-impregnated sponge dressings during hospital admissions. A total of 696 chlorhexidine dressings were applied instead of 3,714 conventional gentamicin cream dressings, resulting in substantial savings in both nursing time and healthcare costs. PD nurses spent 116 hours on chlorhexidine dressings compared to 619 hours on conventional dressings, achieving a net time saving of 508 hours. The total cost incurred for chlorhexidine dressings was S$ 20,880, significantly lower than the S$ 74,280 for conventional dressings, yielding a net cost saving of S$ 53,400. Importantly, no catheter-related infections or allergic reactions to the chlorhexidine-impregnated sponge dressing were reported during the study period.

Despite promising results, limitations include the indirect estimation of dressing time and the lack of post-discharge follow-up to detect delayed dermatitis. As a single-center, short-term study, generalizability is limited.

Nonetheless, this is the first report assessing chlorhexidine dressings in hospitalized PD patients.
In conclusion, this quality improvement initiative showed that using weekly chlorhexidine-impregnated dressings for PD catheter exit-site care can reduce nursing time and dressing frequency without observed short-term complications. The approach may be a practical and efficient option during periods of increased workload or limited resources. Further studies are needed to assess its long-term safety and broader applicability.

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Transforming Peritoneal Dialysis Care Using Mobile Health Technology: The Chronic Kidney Disease Prevention in the Northeast of Thailand (CKDNET) Project Randomized Control Trial of the CKD-PD App

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Overhydration (OH) is one of the most common complications for patients on peritoneal dialysis (PD). It is estimated that 50%-60% of patients on PD are overhydrated, with severe OH producing clinical symptoms in 25% [1,2]. OH is associated with increased morbidity and mortality due to infections, including peritonitis [3] and major adverse cardiovascular events such as myocardial infarction, pulmonary edema, stroke, and hypertensive crisis [4]. OH alone, independent of coexisting cardiovascular pathologies, is a risk factor for increased morbidity and mortality [5]. Early detection of OH is possible by monitoring patients' hydration metrics: blood pressure (BP), body weight (BW), and ultrafiltration (UF) volume.

In resource-limited settings, early detection and treatment of OH is hindered by delayed or infrequent monitoring as hydration metrics are not available in a timely and actionable format. To address this gap, our team at Khon Kaen University developed the "Chronic Kidney Disease—Peritoneal Dialysis" (CKD-PD) smartphone app—a novel tool designed to facilitate real-time hydration metric monitoring and early management of OH [6]. Our recent randomized controlled trial published in the *Journal of Medical Internet Research* evaluated the effectiveness of the CKD-PD app to detect and manage OH across three hospitals in northeast Thailand [7]. The study revealed compelling evidence that digital health tools can revolutionize PD care by improving early detection and management of OH, reducing hospitalizations, and enhancing overall patient outcomes.

Bridging the gap in hydration monitoring with the CKD-PD app

In northeast Thailand, the standard model of care of PD patients includes use of a logbook to record hydration metrics—BP, BW, and UF volume— followed by review at bimonthly PD clinic visits. This lag in hydration metric review results in delayed detection and treatment of OH. The CKD-PD app can be used by PD patients to enter daily hydration metrics and upload the results to the Chronic Kidney Disease Prevention in the Northeast of Thailand (CKDNET) database for monitoring by their PD care providers. The key features of the CKD-PD app are (1) daily data entry for continuous monitoring of hydration metrics, (2) graphical display of hydration status, (3) near real-time data for monitoring patients' hydration metrics by PD clinic staff, (4) an integrated secure chat function to facilitate communication between patients on PD and clinic staff, and (5) integration of hydration metrics from the CKD-PD app with electronic health data in the CKDNET database on the Thai Care Cloud.

Study design and key findings

We enrolled and randomized 208 PD participants to the App group (CKD-PD app users) or the No-App group (standard care). PD clinic staff monitored hydration metrics from the App group weekly using the CKDNET database, and during scheduled bimonthly clinic visits and unscheduled clinic contacts. Hydration metrics from the No-App group were monitored at scheduled bimonthly clinic visits and unscheduled clinic contacts. Hydration metrics were abnormal based on (1) deviation in current BW of >3% from set dry weight, (2) BP >140/90 mm Hg, and (3) UF volume of <500 mL in patients with anuresis. Clinical interventions for OH were made if abnormal hydration metrics or clinical evidence of OH were present 1). on PD staff review and follow up assessment by a nephrologist, 2). during the PD clinic visit, or 3). at an unscheduled visit to PD clinic or hospital. The primary outcome was clinical interventions for OH; secondary outcomes were hospitalizations, deaths, and technique failure. The key results (median follow-up of 11.2 months) were:

- The incidence rate ratio (IRR) for clinical interventions for OH was 2.5 times higher in the App group (p <0.001), indicating earlier and more frequent interventions for OH.
- Hospitalizations were significantly lower in the App group for both all-cause (adjusted IRR 1.60; p=0.008) and fluid overload-specific events (adjusted IRR 4.40; p=0.02).
- App users were more likely to be treated with less invasive interventions, such as dietary counseling and antihypertensive medication adjustment, while No-App patients required more intensive treatments like hypertonic PD solutions or dialysis regimen changes

Key outcomes

This study demonstrated that use of the CKD-PD can facilitate early detection and treatment of OH. These early, low-risk interventions can not only reduce more serious complications but also reduce healthcare resource utilization. This approach is especially critical in middle-income countries like Thailand, where healthcare access and specialist availability are limited in rural areas [8]. The ability to remotely monitor and intervene enables nephrology teams to extend their reach and maintain continuity of care, regardless of location. Patient empowerment was another major benefit observed. With the app, patients had real-time visibility into their hydration status and received timely feedback from their providers. The integrated chat feature allowed for quick clarification and reassurance, or initiating clinical interventions if needed. Importantly, app use adherence was high—85.7% compliance in data uploads—demonstrating its usability and acceptance among patients.

Looking ahead: scaling and sustainability

A larger-scale RCT is needed to evaluate long-term outcomes and cost-effectiveness, but early evidence is promising. With minimal hardware requirements and a user-friendly interface, the app is well-positioned for integration into national kidney care programs. Future directions include developing predictive analytics for OH risk and exploring applications of this model in other chronic disease management programs.

Conclusion

The CKD-PD app demonstrates that with the right technology, it is possible to bridge gaps in care, empower patients, and improve clinical outcomes in PD. As the global burden of CKD continues to rise [9,10], innovative digital health solutions like the CKD-PD app will be essential tools in delivering equitable, high-quality care.

Acknowledgement

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Iron Markers and Outcomes in Peritoneal Dialysis Patients: Insights from the PDTAP Study

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In peritoneal dialysis (PD) patients, effective anemia management is crucial for improving quality of life and reducing morbidity and mortality [1]. Iron metabolism markers—transferrin saturation (TSAT) and ferritin—are central to this process, yet optimal targets for PD populations lack consensus across guidelines [2-7]. To address this gap, we analyzed data from the prospective PDTAP study, which included 4,429 PD patients across 27 Chinese centers (2016–2020). Data were collected on demographics, primary diseases, comorbidities, and clinical outcomes. Restricted cubic splines and Cox regression models were used to analyze the data, adjusting for multiple confounders.

The study revealed non-linear associations between Hb levels and TSAT/ferritin. Hb levels increased with TSAT up to 40%, then plateaued, while ferritin levels increased as Hb levels decreased (Figure 1). Importantly, ferritin levels above 200 ng/mL were independently linked to a 20.7% increased risk of mortality (HR 1.207, 95% CI 1.134–

1.286) (Figure 2), with this risk being more pronounced in patients with a history of cardiovascular disease. Inflammation status further modulated this association: in low-hsCRP subgroups (tertile 1), ferritin >200 ng/mL significantly increased mortality risk (HR 1.297, 95% CI 1.134–1.484), whereas in high inflammation (tertile 3), the association weakened and became non-significant (HR 1.088, 95% CI 0.995–1.190).

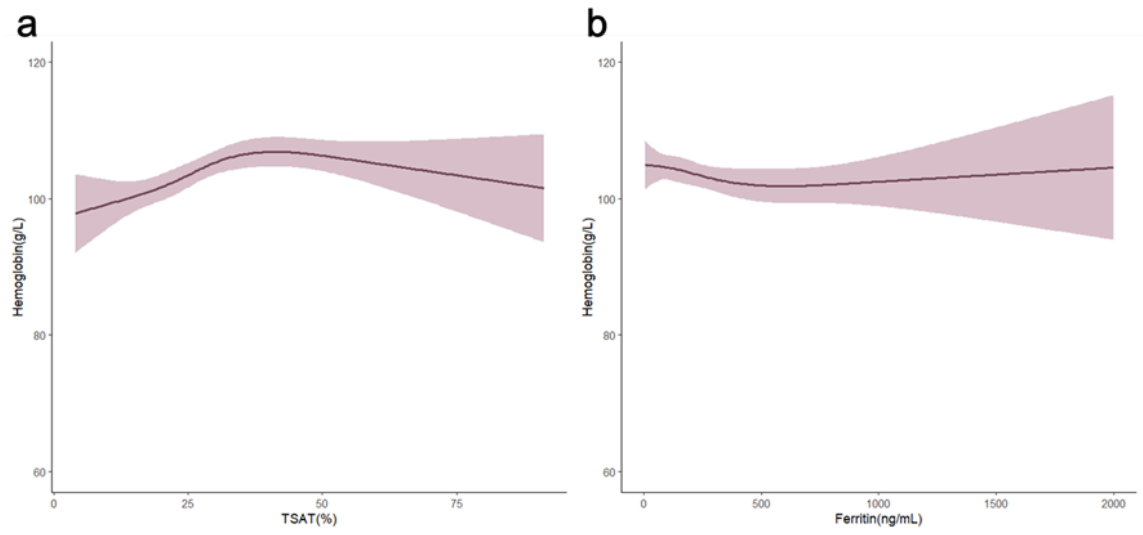

Figure 1. Association between TSAT, ferritin, and Hb. RCS plot of Hb by level of (**a**) TSAT and (**b**) ferritin. Models were adjusted for age, gender, Charlson score, BMI, serum albumin, iPTH, hsCRP, elemental iron and ESA doses.

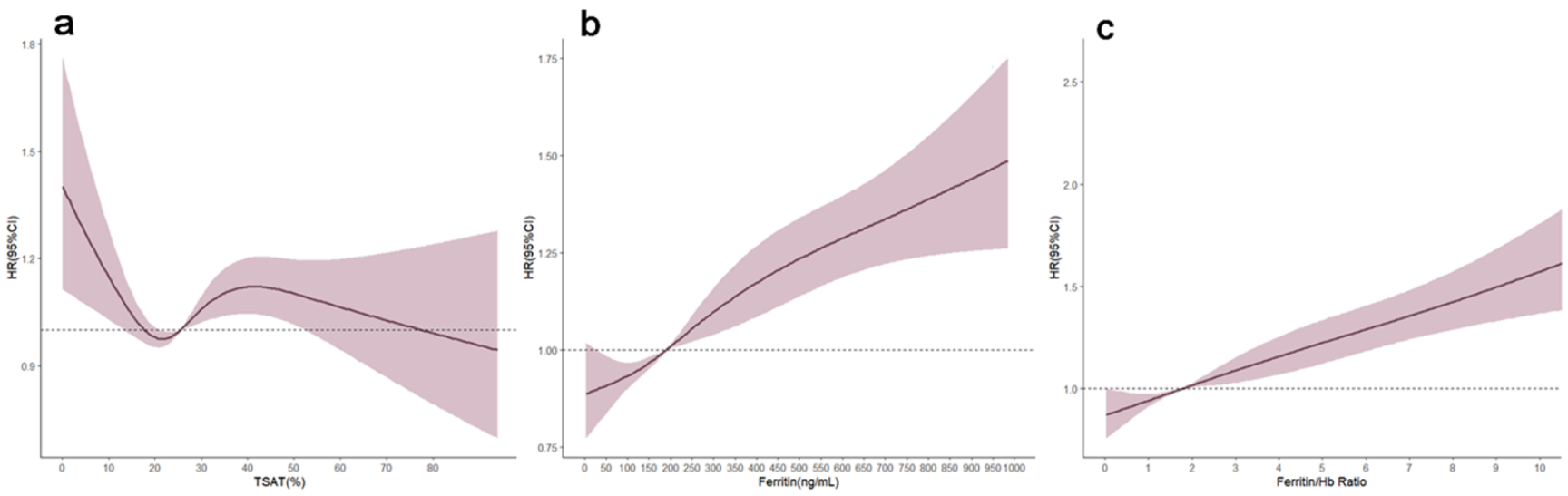

Figure 2. The association between iron markers and death. RCS plot of all cause death by levels of (**a**) TSAT, (**b**) ferritin and (c) Ferritin/Hb ratio. Models were adjusted for age, gender, CVD history, serum albumin, serum total cholesterol, hsCRP, doses of elemental iron and ESA.

A novel finding was the prognostic value of the ferritin/Hb ratio. A ratio >2 predicted a 21.9% mortality increase (HR 1.219, 95% CI 1.144–1.299) and outperformed ferritin alone in identifying iron therapy responsiveness (AUC 0.667 vs. 0.647, *P*<0.001). This ratio integrated iron storage (ferritin) and utilization efficiency (Hb), offering clinicians a tool to differentiate inflammation-driven anemia from true iron deficiency.

Discussion and Implications

These findings challenged contemporary iron management paradigms. The 200 ng/mL ferritin threshold—substantially lower than KDIGO's recommended 500 ng/mL upper limit—highlighted unique risks in Asian PD populations. This reflected ethnic variations in iron metabolism, consistent with Japanese DOPPS data where ferritin >200 ng/mL increased mortality in hemodialysis patients. Crucially, CVD patients exhibited heightened vulnerability to ferritin elevation, suggesting they required stricter iron control. PD-specific factors contributed to these patterns. Compared to hemodialysis, PD involved less frequent blood monitoring and distinct inflammatory dynamics. Elevated ferritin often indicated subclinical inflammation or malnutrition rather than iron overload—a nuance reinforced by hsCRP interactions in the data. Additionally, low iron supplementation rates in the cohort (only 3.5% received IV iron) suggested under-treatment might coexist with iron toxicity risks, necessitating individualized management.

Future Directions

Validation of the ferritin/Hb ratio in diverse populations remained essential. Emerging therapies like hypoxia-inducible factor inhibitors—which enhanced iron utilization by stabilizing erythropoietic pathways—promised synergy with ratio-guided protocols. Further research needed to explore whether stricter ferritin control (<200 ng/mL) in high-risk subgroups improved survival.

Conclusion

The PDTAP study redefined iron management in PD: ferritin >200 ng/mL independently predicted mortality, particularly in CVD patients, while the ferritin/Hb ratio >2 provided a clinically actionable tool for optimizing supplementation. Integrating these findings into practice offered safer anemia management for PD patients across the Asia-Pacific region.

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Introducing PDTAP (Peritoneal Dialysis Telemedicine-based Management Platform) in China

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The Peritoneal Dialysis Telemedicine-based Management Platform (PDTAP) was established in 2016 by Professor Jie Dong and her team at Peking University First Hospital. By the end of 2024, the platform had been applied in 68 peritoneal dialysis (PD) centers across 19 provinces in China, assisting over 500 healthcare professionals in the remote management of over 30,000 PD patients. It successfully extended the model of chronic disease management for PD in Peking University First Hospital to a national scale. As early as 2018, the "Beijing Model" based on PDTAP was presented at the 17th Congress of the International Society for Peritoneal Dialysis (ISPD) in Vancouver, receiving high praise from experts.

The PDTAP enables seamless integration between patient and physician interfaces, facilitating real-time data sharing. By utilizing electronic follow-up records covering pre-consultation, in-consultation, and post-consultation stages, it establishes an integrated system for chronic disease management and complication prevention. Through a multi-center collaborative model and an inter-center referral system, PDTAP has created China’s first cross-regional online PD medical consortium. Additionally, by integrating APD-RPM data, an intelligent dietitian mini-program, and the "Let’s chat about PD" Science Popularization Official Account, the platform supports patients with continuous, real-time professional care and education. Recently, several artificial intelligence tools on early-warning of adverse clinical outcomes developed and validated using PDTAP cohort data have been published, further advancing the patient-centered, high-quality care.

The PDTAP significantly enhances standardized and efficient center management. Structured electronic data and standardized tabular records make PD clinical pathways more tangible, allowing hospitals at all levels to adopt best practices. Built-in clinical tools, shared work logs, nurse task lists, and automated alert function included in PDTAP make health workflows more efficient and orderly. Key performance indicators and continuous quality improvement metrics are visually presented through auto-generated reports and trend charts, offering robust support for center management and clinical decision-making.

By establishing a cross-regional research collaboration network, PDTAP has constructed China’s largest multicenter prospective PD cohort. Under principles of equality and open data-sharing, investigators have

published over 10 studies to reveal characteristics of China's PD population and key predictors in the occurrence of comorbidities and worse outcomes. Moreover, PDTAP data provided critical evidences for Beijing's PD healthcare pricing reform, leading to the inclusion of PD services in Class A medical insurance in December 31, 2021. This policy is helpful to promote standardized PD care with recognition of the value of healthcare labor, further facilitating regional PD adoption.

As the first telemedicine-based PD management platform, the PDTAP not only achieve extensive coverage and transformative impact in China, but also serve as a global exemplary model for multi-regional remote patient management, center quality control and research collaboration network, advancing the application and development of PD.

PD in the Philippines: A Visit to the Heart of the NKTI Program


Professor Talerngsak Kanjanabuch, M.D. [1] (left) and Dr. Donnah Franceska G. De Leon, M.D. [2] (right)

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The Philippines—a nation of over 7,000 islands, rich cultural diversity, and dynamic urban-rural contrasts—offers a unique healthcare landscape. In Metro Manila, a city of more than 13 million people, the **National Kidney and Transplant Institute (NKTI)** stands as the epicenter of renal care and innovation. Despite the absence of a national dialysis registry, NKTI is widely believed to care for nearly one-third of all Filipino PD patients— with 870 active cases—a remarkable achievement by any standard, underscored by a one-year patient survival rate of 89%.

During my recent visit to NKTI, I was struck by the scale, structure, and sophistication of its **PD program**. Housed in a purpose-built **PD Center of Excellence**, the unit is led by **Dr. Donnah Franceska G. De Leon**, whose leadership is reflected in every aspect of the center's multidisciplinary operations—from nurse-led patient training and home-based follow-up to digital health tools. On any given day, more than 5,600 PD fluid bags are dispensed, and hundreds of patients are supported remotely through platforms like **BOT MD**, showcasing NKTI's commitment to innovation and access.

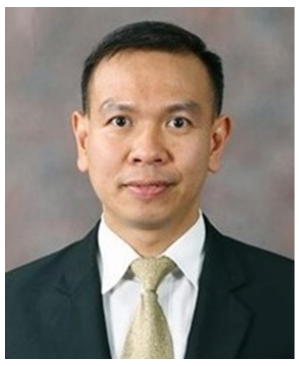
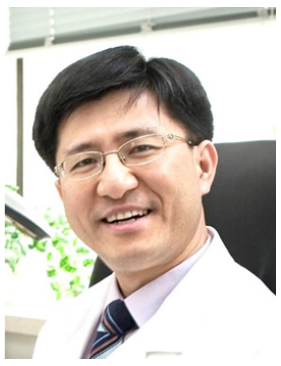
In July 2025, I had the opportunity to contribute to this dynamic learning environment by delivering a session on **"PD-related Infection and CQI (Continuous Quality Improvement)."** I shared international and regional strategies for reducing peritonitis, drawing from both evidence and experience. What followed was truly energizing—**nurses and fellows-in-training packed the room**, engaging with insightful questions, sharing real-world cases, and fostering a vibrant, practice-based dialogue. It was more than a lecture; it was a meaningful exchange rooted in NKTI's strong culture of clinical excellence and **nurse-led empowerment**.

Inspired by this interaction, we now plan to launch a **nurse-led, cross-country PD case discussion every three months**—linking **NKTI in Manila** and **King Chulalongkorn Memorial Hospital (KCMH) in Bangkok**. This initiative aims to amplify nursing leadership, promote collaborative learning, and share regionally relevant insights in PD care.

NKTI's PD-first approach is a bold response to the country's growing dialysis demand. With government-backed financial support through PhilHealth and progressive policies like the PD Z-benefit, PD is not only viable—it's increasingly preferred for suitable patients. And while challenges remain—geographic disparities, workforce gaps, and infection risks—NKTI is proving that with vision, structure, and strong leadership, a high-impact, patient-centered PD program is entirely achievable.

Figures: Dr. Donnah Franceska G. De Leon, Head of the NKTI PD Program, is pictured with the author during the site visit (**upper left**), with the front view of the National Kidney and Transplant Institute (**upper right**). The **lower left** shows NKTI's multidisciplinary care team, exemplifying its integrated, patient-centered approach to PD, while the **lower right** highlights the PD fluid storage warehouse, reflecting the scale and operational efficiency of the institute's daily logistics.

Peritoneal Dialysis in Mongolia: A Journey of Hope, Partnership, and Progress

Professor Talerngsak Kanjanabuch, M.D. [1] (left) and Professor Kook-Hwan Oh, M.D. [2] (right)

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Nestled between Russia and China, Mongolia's expansive steppes and rugged terrain pose extraordinary challenges to healthcare delivery. For patients with kidney failure, the challenge is even greater. Hemodialysis, traditionally centralized in Ulaanbaatar, has long required rural patients to uproot their lives and move to the capital—a migration burdened with social, financial, and emotional costs.

In response, Mongolia's embrace of peritoneal dialysis (PD) since 2014 has been nothing short of transformative. With its decentralized, home-based model, PD offers a life-saving alternative that aligns perfectly with Mongolia's geography. What began as a cautious experiment with just 16 patients in 2016 has grown into a national movement, now serving over 129 patients—accounting for roughly 10% of the country's dialysis population.

The recent ***12th Korea–Mongolia Nephrology Meeting***, held in Ulaanbaatar in May 2025, showcased the remarkable evolution of this journey. Co-organized by the Raphael International, a Korean NGO aimed for the clinical capacity building of the doctors in developing countries, and Mongolian Society Nephrology, the event was a vibrant celebration of cross-border collaboration and shared learning.

I had the privilege of delivering two lectures on PD: *"Seizing the Golden Window: Expanding Peritoneal Dialysis Through Urgent Start Pathways"* and *"Winning the Silent Battle: Reducing Peritonitis in PD – Lessons from International and Regional Best Practices."* Both sessions were met with tremendous enthusiasm. The response—especially from PD nurses—was inspiring, sparking dynamic discussions, insightful questions, and vibrant

experience-sharing from the floor. It was deeply moving to witness the energy and commitment of frontline providers who are determined to advance PD in their own settings.

More than just an academic gathering, the meeting affirmed the enduring partnership that has shaped Mongolia's PD landscape. From translated dialysis handbooks to over 60 webinars during the COVID-19 pandemic, Raphael International have provided steady support. Today, that support is reciprocal: Mongolian clinicians are not only adopting global best practices—they are now leading local training, mentoring junior staff, and advocating for PD-first models within their system.

Despite clear progress, challenges remain. Mongolia's vast geography and harsh winters complicate PD logistics. Skilled personnel are still limited outside the capital. And while the government now covers dialysis treatment, gaps remain in access to medications like erythropoietin. Nevertheless, with PD costing 20% less than HD, the Ministry of Health continues to explore PD expansion as a cost-effective, patient-centered strategy.

Attending the Korea–Mongolia meeting was both inspiring and humbling. It reminded me that true innovation doesn't always require high-end technology—it begins with partnership, trust, and a shared vision of equity. PD in Mongolia is no longer an experiment—it's a movement. And as the country continues to invest in its nephrology services, PD stands ready to lead the way toward a more resilient, inclusive, and sustainable renal care system.

Figures: Top Left: Dr. P.N. Shastin, visionary founder of the Third Central Hospital of Mongolia. His enduring legacy continues to shape Mongolia's medical progress and remains a profound source of inspiration. **Top Right:** Prof. Talerngsak Kanjanabuch (Chulalongkorn University, Thailand), Dr. Shastin's commemorative model, and Prof. Kook-Hwan Oh (Seoul National University Hospital, Korea) at the Medical Museum, Third Central Hospital of Mongolia. **Middle Right (left to right):** Resident (Third Central Hospital, Mongolia); Prof. Kook-Hwan Oh; Dr. Sarangerel (Third Central Hospital, Mongolia); Prof. Talerngsak Kanjanabuch; Dr. Jeonghwan Lee (Seoul National University Hospital, Korea); and Dr. Enkhzaya (Raphael International Mongolia). **Bottom Right:** Dr. Jeonghwan Lee; Prof. Khaidav Gelegjamts—renowned founder of the nephrology department at the University of Health Sciences, Mongolia, now in his 90s and held in the highest esteem by Mongolian nephrologists; Prof. Kook-Hwan Oh; and Prof. Talerngsak Kanjanabuch.

Figure: Attendees of the 12th Korea–Mongolia Nephrology Meeting, held in Ulaanbaatar in May 2025, marking a remarkable chapter in the ongoing evolution of bilateral collaboration in nephrology.

Expanding Peritoneal Dialysis in Pakistan

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Co-Chair PD Academy of Pakistan
Deputy Chair, ISPD International Liasson Committee
Deputy Chair, ISN Educational Ambassador Committee

The **Peritoneal Dialysis Academy of Pakistan** & **Pakistan Society of Nephrology** successively organized the **2nd International Peritoneal Dialysis (PD) Symposium 2025**, held from April 18 to 20, 2025, at the Marriott Hotel in Karachi. The symposium was endorsed by the International Society of Nephrology, the International Society of Peritoneal Dialysis and the Asian Pacific Society of Nephrology.

The theme of the symposium — "Expanding Peritoneal Dialysis in Pakistan" — lived up to its expectations, with regional and global leaders such as Professor Talerngsak Kanjanabuch (Thailand), Professor Lilly Mushahar (Malaysia), Professor Nishantha Nanayakkara (Sri Lanka), Professor Shoeb Nomany (Bangladesh), Professor Rashed Sharaf & Professor Umar Farooq (USA) to name a few; made their way to Karachi to teach and help grow peritoneal dialysis in Pakistan and South Asia. Their global perspectives were complemented by strong contributions from local leaders, including Dr. Salman Imtiaz, who presented national PD data; Dr. Ahad Qayyum, who addressed key national policy hurdles; Dr. Nauman Tarif, who showcased local innovations in automated PD technology; and Dr. Faiza Saeed, who served as the driving force and chief organzier of the event. A dedicated pediatric session further highlighted the unique aspects of peritoneal dialysis in children, emphasizing early intervention and specialized care.

The ACCME-accredited event welcomed more than 150 registered delegates from various cities across Pakistan — including adult and pediatric nephrologists, postgraduate trainees, dialysis nurses, and technicians — the event reflected a growing national interest in advancing PD care.

A major highlight of the symposium was a series of hands-on workshops titled **"PD in AKI"** and **"Train-the-Trainer."** The *"PD in AKI"* workshop was an advanced session designed to teach physicians the practical application of PD in acute kidney injury, including dedicated hands-on training for adult and pediatric PD catheter insertion at the bedside. On the other hand, the *"Train-the-Trainer"* workshop aimed to empower healthcare professionals — including physicians, nurses, and technicians involved in PD care — to become emerging leaders in providing PD services. These workshops significantly contributed to the educational mission of the event and promoted the practical adoption of PD techniques in both urban and rural settings.

The symposium concluded with engaging panel discussions, the distribution of shields, and a renewed call to action to build a robust, patient-centered PD infrastructure in Pakistan. Through visionary leadership and collective commitment, the event laid a strong foundation for sustainable kidney care and positioned Pakistan on the path to becoming a regional leader in peritoneal dialysis.

Figures. 2nd International Peritoneal Dialysis (PD) Symposium 2025, held at the Marriott Hotel in Karachi.

International Survey: Facial Mask Use in Peritoneal Dialysis

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We are inviting you to participate in a research study, entitled **"Facial Mask Use in Peritoneal Dialysis: Global Practices."** The objective is to "Analyze global practices regarding facial mask use in peritoneal dialysis, identifying regional variations, adopted guidelines, and nurses' perceptions of its effectiveness in preventing infections.

Please find a link below that aims to explore global practices regarding facial mask use in peritoneal dialysis, identifying regional variations, adopted guidelines, and nurses' perceptions of its effectiveness in preventing infections. Your response will assist in improving PD practices worldwide. Thank you so much. Link is: https://forms.office.com/Pages/ResponsePage.aspx?id=Mc_rUTlYLkGDu4AaK6eGJ5lBpaokLSZAgqt0Gn1M58RUN0dYSExaRk9SSUlaWFBMR0lWSUI2MklXUy4u

CONSENT TO PARTICIPATE IN RESEARCH

You are being invited to participate in a research study, entitled **"Facial Mask Use in Peritoneal Dialysis: Global Practices."** The objective is to "Analyze global practices regarding facial mask use in peritoneal dialysis, identifying regional variations, adopted guidelines, and nurses' perceptions of its effectiveness in preventing infections. "It is believed that the benefits obtained in this study consist of a better understanding of face mask use in peritoneal dialysis and its variations and meanings. The risks of this investigation are considered minimal, mainly the participants' possible discomfort in answering the survey and the time spent answering it.

This research is voluntary, and you have the right not to answer any item and to interrupt your participation at any time for any reason.

It will take you approximately **15 minutes.** You will not receive any compensation for this. No identifying information about you will be included in publications that may result from this research.

The collection of information for this project will be completed in **August 2025,** and all information obtained will be stored securely for a period of two years after this date or until the completion of the written work.

By continuing with this research, you agree that any questions you had have been adequately clarified and that you agree to participate in this study.

I understand the procedures described above.

The survey link is [https://forms.office.com/Pages/ResponsePage.aspx?id=Mc_rUTlYLkGDu4AaK6eGJ5lBpaokLSZAgqt0Gn1M58RUN0dYSExaRk9SSUlaWFBMR0lWSUI2MklXUy4u

or QR Code