

WE1

Reducing the harm from aminoglycoside exposure in people treated with peritoneal dialysis through screening for MT-RNR1

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Background/Objectives:

Aminoglycoside antibiotics, such as gentamicin, are highly effective against Gram negative organisms, and are central to PD peritonitis treatment, particularly as therapeutic dose-monitoring accounts for differences in residual kidney function. However, aminoglycosides can cause ototoxicity, either via a cumulative dose or due to a single administration in those with a variant in the mitochondrial gene MT-RNR1. Individuals with a single nucleotide substitution in this gene are at very high risk of developing aminoglycoside ototoxicity.

The NHS Genomic Medicine Service offers testing for MT-RNR1 variants as part of the National Genomics Test Directory (R65), with active encouragement of NHS trusts to implement this service. We introduced a nurse-led pharmacogenomic screening program for all people incident to PD within our unit, with the aim of minimising the risk of aminoglycoside-related ototoxicity.

Methods:

A multi-disciplinary quality improvement team, including the local genomics service, pharmacists from the antimicrobial stewardship program, and home dialysis team, developed a local guideline including steps to be taken in case of a positive result. All incident PD patients from February 2025 onwards were verbally consented for MT-RNR1 genetic testing. Blood sampling was carried out prior to PD catheter insertion during a nurse-led assessment.

Results:

To date 31 people have been tested with a turn-around time of approximately 14 days. All patients thus far have tested negative for the MT-RNR1 variants, in line with a low risk of single-dose gentamicin-related ototoxicity.

Conclusions:

MT-RNR1 genetic testing is now embedded as part of routine care for all incident PD patients in our unit. While MT-RNR1 variants predisposing to ototoxicity are reportedly seen in 1% of the population, the local diverse PD population may have different rates. This screening program will ensure those at highest risk of developing single-dose aminoglycoside-related ototoxicity are identified at the start of dialysis, allowing for targeted antimicrobial therapy in suspected peritonitis.

WE2

Assessing concordance between patient choice and initial dialysis modality: A quality improvement project focusing on home therapy development

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Introduction

Supporting patients to decide which treatment to receive if they develop end stage kidney disease (ESKD) is a fundamental element of any nephrology service. Subsequently, appropriate systems and expertise are required to enact patients' decisions and deliver effective care. We used plan-do-study-act (PDSA) methodology to evaluate and target improvement concerning the concordance between dialysis decisions and therapies received.

Methods

Using electronic patient records from one renal unit, we included all patients that were reviewed by the renal education nurse between February 2023 and December 2024. Working in a non-transplant centre, we have focused on dialysis and conservative kidney management (CKM) rather than transplant decisions, as outcomes will be more applicable and relevant. For patients awaiting transplantation, their bridging dialysis modality was counted as their 'choice'. Patients that received a pre-emptive transplant (n=4) and all patients that died before developing ESKD (n=11) were excluded. We reviewed the treatments of all patients who had developed ESKD by February 2025. We then looked at the causes of non-concordance between choice and outcome and have enacted change.

Results

251 patients were reviewed over the period studied and 15 were excluded (see above). Of the remaining 236 patients, 101 patients received their choice, 10 did not and 125 patients had not developed ESKD by February 2025.

Of the 101 patients receiving their choice, 44 opted for haemodialysis (HD), 33 for PD peritoneal dialysis (PD) and 24 for CKM.

Of the 10 patients not receiving their choice, 3 opted for HD, 6 opted for PD and 1 for CKM. For HD, all 3 patients changed their decision to CKM. Of the 6 who did not receive PD when it was their initial choice, 4 started on HD acutely, 1 required HD due to new PD contraindications and 1 changed decision to HD. For CKM, 1 patient changed decision to HD. Using PDSA methodology, we established that the largest modifiable group was patients that had opted for PD who started HD acutely (n=4). We have therefore worked with surgical colleagues to successfully reduce waiting times for PD catheter insertion. We have also commenced an urgent start PD service. Finally, we developed an 'alert system' where the eGFRs of all patients with a PD decision are reviewed and flagged to the patient's

consultant if there is a significant drop, to decide on whether to expedite PD catheter insertion. The results after our interventions are being collated and will be included in our poster or presentation if selected.

Discussion

Effective advanced kidney care and adhering to dialysis decisions where clinically possible, are key elements of an effective nephrology service. We have shown very high rates of concordance with dialysis and CKM decisions, showing that our service is working well for the vast majority of patients. We have also highlighted an area for improvement; patients opting for PD and presenting acutely. Further work could include transplantation decision concordance and could investigate the factors that influence patients changing their decisions over time.

WE3

Standard technique reviews in patients home: A quality improvement project to reduce peritonitis infection rates in peritoneal dialysis patients

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Peritoneal dialysis (PD) peritonitis is a serious complication of PD. In response to high peritonitis rates in our centre, we established a quality improvement project to improve patients' technique, with an objective of reducing rates to <0.4 episodes per patient year. We performed a Plan-Do-Study-Act (PDSA) cycle and established a programme of home-based technique reviews.

Method:

As part of a local quality improvement programme our first PDSA cycle introduced in-centre technique refresher sessions. Attendance was low, which led to a second PDSA cycle introducing home-based technique review. From November 2023 we required patients to have a 6 monthly home-based technique review. These were recorded in medical records. From May 2024 we established a database of technique reviews. We monitored peritonitis rates throughout the project.

We performed an audit of our database from May 2024-April 2025 to assess the uptake of technique reviews and identify relationships with incidence of peritonitis.

Results:

From May 2025-April 2024, we identified 153 prevalent PD patients. 122 (80%) had a home-based technique review. 45 (29%) patients had an episode of peritonitis. 28 (23%) patients who had technique review had an episode of peritonitis. In the 31 (20%) of patients who did not receive a technique review 17 had an episode of peritonitis (55%).

The peritonitis rate in our unit improved from 0.62 in November 2023 to 0.42 by May 2025.

Conclusion:

We achieved high rates of home-based technique reviews. Following this intervention peritonitis rates in our unit consistently improved. We identified high rates of peritonitis in patients without a technique review. This may reflect impact of intervention and lack of engagement from this group of patients. Our database identifies patients who are at higher risk of peritonitis having not had a technique review, allowing targeted efforts on reducing rates in this group.

WE4

In-centre technique refresher training for patients on peritoneal dialysis: A quality improvement project to reduce peritonitis infections in peritoneal dialysis patients

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Objectives

Our unit aimed to reduce our peritoneal dialysis (PD) peritonitis rates by using quality improvement methodology, supported by a regional network quality improvement programme. We identified a role for a refresher training programme to ensure consistent technique across all patients and allow patients to have a social peer support environment for learning.

Methods

We used process mapping to identify areas of improvement. We identified patient training as a priority. We applied Plan-Do-Study-Act (PDSA) methodology. We introduced a regular patient refresher session and invited PD patients and their carers to attend. We invited patients by letter and reviewed attendance. We reviewed our PDSA cycle and identified poor uptake of the sessions leading to changes in the way patients were asked to attend the session, with appointment rather than invitation (July 2024). We identified patients who did not attend and developed a further quality improvement initiative to target training for these patients. We continuously measured our peritonitis rates throughout the process.

Results

From November 2023-April 2025, we ran 14 refresher sessions. We invited 204 patients. 59 (41%) attended and 145 (59%) declined. In July 2024 we introduced appointment letters. The median number of patients attending each session up to July 2024 was 4 (+/-2) and 5 (+/-2) after July 2024, with uptake improving from 38% prior to the change to 44% afterwards.

Our peritonitis rates fell from 0.62 in December 2023 to 0.42 in May 2025.

Conclusions

Uptake of refresher sessions was low. We saw a small increase in patient numbers attending these sessions following introduction of appointment letters. Recording attendance at these sessions allowed us to identify patients who are not attending, allowing us to focus on providing technique reviews for these patients at home. Since initiating this quality improvement project, we have seen an improvement in our peritonitis rates.

WE5

GRIP33: Growing incident peritoneal dialysis to 33%

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction

The home dialysis population in London has continued to increase linearly over the last decade with a surge during the Covid-19 pandemic. However, this growth has been surpassed by the population requiring kidney replacement therapy, as demonstrated by the pressure on in-centre haemodialysis, illustrated by the Dialysis Occupancy Measure. As part of developing long-term plans for dialysis, this work set out to develop a calculator to support units to define realistic and sustainable growth plans for peritoneal and home haemodialysis.

Methods

A spreadsheet-based calculator was developed requiring the input of unit-based variables. These included: predicted dialysis growth, starting dialysis and home dialysis prevalent populations, mean time on in-centre haemodialysis and home dialysis, proportion of incident dialysis patients starting on home dialysis treatment. The calculator allows unit-developed predictions to be test as part of the calculator. A variety of scenarios were explored, including an incident rate of 33% on home dialysis, a realistic and evidence based target for an incident dialysis population.

Results

A large renal centre is described as an exemplar: using a moderate dialysis growth prediction of 3.25% per year with a 1610 patient starting dialysis population including 225 patients on home dialysis. Assuming an average time on in-centre dialysis of 3.2 years and home dialysis of 1.7 years, with 33% of the dialysis population starting on home dialysis, the overall dialysis population would grow to 322 patients over a decade. This would see only a small change in the prevalent home dialysis population from 14.1 to 15.3%, however, to achieve this growth the incident dialysis starts would need to increase nearly three-fold from 7 to 20 patients per month.

Discussion

The use of a calculator to define incident dialysis populations as part of 3- and 10-year dialysis growth plans will help inform operational planning to define the resources required to ensure sustainable growth, including workforce. The calculator demonstrates that even with ambitious plans to grow home dialysis programs, in the face of growing demands for dialysis, achieving a 20% prevalent dialysis population will be challenging and unlikely to be achieved. The 33% target for the incident dialysis population should be widely implemented as an evidence-based measure of progress, ensuring equitable access to dialysis at home, underpinned by patient choice.

WE6

Weight gain in patients on Peritoneal Dialysis and impact on Transplant listing

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction

Peritoneal dialysis (PD) has long been associated with the idea of weight (wt) gain amongst recipients. This perception has led to many conflicting views from both medical and surgical transplant teams, resulting in increased patient confusion and potentially limiting available treatment options. The aim of this project was to ascertain the weight profile of our prevalent PD population, note changes in weight over the duration of PD treatment in those active on the waiting list and identify whether this was changing their eligibility for renal transplant listing.

Method

All prevalent PD patients under the care of University Hospitals of Liverpool Group were identified and the following data was collected: duration of PD treatment, weight changes over duration of PD treatment, current BMI, transplant status, changes to transplant status over the duration of PD treatment and the reasoning behind this.

Results

Currently 65 patients are actively using PD as a treatment for their kidney disease. Of these, 5 were using an assisted programme for additional support. The median length of time on PD was 12 months, with a range of 1 - 72 months. Median BMI was 29.1kg/m², with a range of 17.2 - 39.7kg/m². Of the 65 patients included in the data, only 19 (29%) were active on the national transplant list, with 14 in the assessment stage, 7 patients suspended for medical reasons (not weight related), 22 considered as not medically suitable and 3 requiring weight loss in order to be activated (range 32.6 - 39.7kg/m²).

Further analysis of the patients active on the transplant list showed a mean BMI of 28.5kg/m², with a median weight gain of 3.8kg in those listed.

Discussion

It was clear from the results that weight gain in the PD population was not as significant as once thought, with no patients being suspended from the transplant list for weight gain, and only 3 patients (5%) requiring weight loss to be activated. Consideration should also be given to PD patients that are weighed in clinic with a daytime dwell insitu as this can increase weight by up to 2.5kg. Changes in height measurements within documentation can lead to significant changes to BMI calculations, further impacting on potential transplant listings.

Further work will be undertaken looking at patients starting PD at higher BMIs (who are otherwise medically suitable) in order to support targeted weight loss and potential transplant list activation.

WE7

Breaking down barriers to Home Haemodialysis: Lessons learned from a dedicated 'Home Haemodialysis Roadshow'

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Background

Home haemodialysis (HHD) offers improved quality of life, flexibility, and in some studies improved survival. It offers a useful alternative and long-term solution to in-centre dialysis in a decade of increasing demand and stretches on capacity. Despite these benefits, uptake remains low with only 5% of our prevalent patients on HHD.

To address this, we designed a multidisciplinary "roadshow" style recruitment initiative, combining education, exploration of barriers, collection of FAQs, and early outcome evaluation.

Methods

The initial roadshow was completed in one of our satellite units in February 2025. It was delivered by an MDT: HHD consultant, lead nurse, technician, physician associate and HHD patient volunteer. The team approached 26 satellite haemodialysis patients, exploring their understanding of HHD. Data collected included demographics, expressed interest, perceived/objective barriers, and patient questions. Patients were followed up at one and six months. Barriers were categorised as medical, housing, or personal/psychological.

Results

Of the 26 patients approached (mean age 56, range 24–78; 14 male, 12 female), 17 (65%) expressed initial interest. Motivators included autonomy, flexibility, and reduced travel. Nine (35%) declined, citing medical concerns (arthritis, cancer treatment, unstable blood pressure), personal factors (fear of needling, family exposure), or housing issues (lack of space, unsuitable environment).

FAQs reflected uncertainty and information gaps about HHD:

- Training: Duration, location, preparation.
- Dialysis schedule: Frequency, need for overnight dialysis.
- Set-up: Space, plumbing, suitability of rented housing.
- Travel: Ability to holiday.
- Safety: Managing illness, dialysing alone.
- Support: Access to help and reviews.

At one month, 9 patients (35%) remained interested. At six months, 8 patients (31%) still wished to pursue HHD: one had completed training and was dialysing independently, two were preparing to start training, one had been transplanted, four were still considering.

Conclusion

The 'Roadshow' approach demonstrated high initial interest but modest conversion to training. Housing, vascular access, and medical instability were key barriers to recruitment. Patient FAQs revealed consistent concerns and some misconceptions about training, safety, logistics, and support, many of which are modifiable through targeted education and reassurance. Expansion of HHD uptake will require sustained multidisciplinary effort, including further roadshows, peer mentoring, housing advocacy, and improved patient information resources and education.

WE8

Incidence and management of Coagulase-Negative Staphylococcal Peritonitis: A single-centre experience with intraperitoneal Urokinase

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction:

Coagulase negative staphylococcal (CNS) associated peritoneal dialysis (PD) peritonitis is a complication of therapy and a potential cause of technique failure. CNS is less virulent when compared to most organisms causing PD peritonitis and is related to touch contamination. Due to biofilm production, antibiotic resistance and dosing inadequacies; relapses and repeat infections occur. We describe our centres' experience with these cases and the use of Urokinase in managing these cases

Methods:

All PD peritonitis cases reported in 2024 were noted. Episodes occurring within 30 days of PD catheter insertion were excluded. Incident, repeat and relapse episodes of CNS peritonitis were analysed retrospectively. Treatment and outcomes until July 2025 were assessed. Reporting of PD peritonitis, medical cure, relapse, recurrence and repeat episodes are as per International Society of Peritoneal Dialysis (ISPD) standards

Findings:

36 PD peritonitis episodes were reported in 2024 with a rate of 0.36 episodes per patient year at risk (EPYR). The incidence of CNS peritonitis was 44.4% (0.16 EPYR) with 2 of these cases having a polymicrobial enterococcal component. All patients were treated with 2 weeks of intraperitoneal (IP) vancomycin with a medical cure rate of 75%. Median time to peritonitis from starting PD was 15 months. 1 patient that initially achieved cure, had successful retreatment at 7 months for a repeat polymicrobial peritonitis. 4 patients did not achieve medical cure. Of those, one had a repeating polymicrobial peritonitis that led to technique loss. The 3 patients that fell under the non-medical cure category developed a total of 5 relapse episodes. In 2 patients with a first relapse episode, Urokinase 100,000 units IP was used weekly along with 3 weeks of IP vancomycin and oral rifampicin. Technique salvage was successful in one case. However in the other there was technique loss, with root cause analysis finding that vancomycin levels were not well maintained due to high body weight, residual function and automated PD use. The 3rd patient also had adjunctive urokinase use for her 3rd relapse episode. The initial 2 relapse episodes failed with 3 weeks and subsequently 4 weeks of IP vancomycin. Catheter salvage was pursued due to frailty, anuria and patient had developed recurrent arrhythmias on haemodialysis. On the 3rd relapse, daily IP urokinase 100,000 units was used safely along with IP Daptomycin and oral linezolid (rifampicin resistance noted). This kept the patient peritonitis free for a longer period of over 5 months following 3 consecutive episodes. This patient

eventually required simultaneous catheter removal and reinsertion following a repeat episode and has remained peritonitis free up to this point

Discussion/Conclusion:

CNS peritonitis is a common causative agent for PD peritonitis in our cohort with medical cure rates mirroring other large cohort studies. Relapse and repeat infections especially in the presence of enterococcal infection is a major issue. Utilizing effective antibiotic therapy along with high dose urokinase as an adjunct can help eradicate biofilm and aid in maintaining or prolonging technique survival. We describe the novel use of daily urokinase which seemed to be well tolerated

WE9

Variations in Home Haemodialysis across London; a regional approach to improving access

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Introduction: The 20% target for home dialysis set by GIRFT remains a challenge for many centres to achieve. While the home dialysis population in London has increased over the last decade in all seven renal units in the London Kidney Network (LKN), the prevalent population varies widely. The majority of home dialysis patients are on Peritoneal Dialysis, with rates of home haemodialysis (HHD) varying between just 1.7% and 5.3% of total haemodialysis populations across centres. As part of a wider initiative to improve access to dialysis at home we set out to explore local barriers and challenges to increasing the provision of HHD in London.

Methods: An anonymous survey was distributed to the lead clinicians, including nurses, responsible for delivery of home haemodialysis at each centre. Information was sought on patient numbers, resources (staffing, infrastructure and machines), recruitment criteria, challenges (patient factors, systems factors) and governance.

Results: All seven renal units within the network provided a response. As expected there was a significant variation in staffing models and ratios, in training infrastructure and environment, and in uptake of home haemodialysis. There was consensus from all units about the need and benefit of improving access to HHD within their centre but a lack of consensus in how to achieve this.

A summary of the themes is included in Table 1.

Discussion: While the number of patients on home dialysis in London is growing overall, there is still a need and an opportunity to improve access to Home Haemodialysis, the prevalence of which remains low. There is significant variation in how this is resourced and delivered. Challenges are varied across units but follow key themes. The results of this survey highlight the potential for shared learning and quality improvement through collaborative working. These findings have triggered the development of a Home Haemodialysis service specification tool through the LKN. This will enable each unit to define individual challenges and areas of need, to drive local change, and ultimately to improve the uptake of home haemodialysis.