



Lecture Code : IS09-S1

Session Name : Industry Symposium 9 (Vantive)

Session Topic : Industry Symposium 9 (Vantive)

Date & Time, Place : June 13 (Sat) / 11:50-12:30 / Room 3 (GBR 103), 1F

RPM in Korea: A Practice-Driven Approach with MyPD

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Peritoneal dialysis (PD) is a home-based renal replacement therapy that offers flexibility and improved quality of life for patients with end-stage kidney disease. However, successful PD management requires continuous monitoring of treatment adherence, dialysis adequacy, ultrafiltration status, blood pressure, and early detection of complications such as peritonitis or catheter dysfunction. Remote patient monitoring (RPM) has emerged as an innovative digital health strategy capable of transforming PD patient care by enabling real-time data transmission between patients and healthcare providers. RPM systems integrated with automated peritoneal dialysis platforms allow clinicians to remotely access treatment data including dwell times, drainage volumes, ultrafiltration trends, and treatment interruptions. This continuous flow of information facilitates early identification of clinical issues before they progress into severe complications requiring hospitalization. Early intervention through RPM can reduce technique failure, emergency department visits, and unplanned admissions, thereby improving patient safety and preserving long-term PD viability. One of the major advantages of RPM is enhanced treatment adherence. Patients receiving home dialysis may experience difficulties maintaining prescribed dialysis schedules or recognizing abnormal treatment patterns. RPM enables healthcare teams to monitor compliance remotely and provide timely feedback or education when deviations occur. This proactive approach promotes patient engagement and reinforces self-management behaviors, which are essential for successful long-term PD therapy. RPM also improves communication between patients and multidisciplinary care teams. Traditional PD follow-up relies heavily on periodic outpatient visits, potentially delaying recognition of clinically significant changes. Through RPM, clinicians can review patient data daily and intervene rapidly when abnormalities are detected. This model supports personalized care and fosters stronger patient-provider relationships while reducing

the burden of frequent hospital visits, particularly for elderly or geographically isolated patients. From a healthcare systems perspective, RPM contributes to operational efficiency and resource optimization. Remote monitoring reduces unnecessary clinic visits while enabling healthcare providers to prioritize high-risk patients requiring urgent attention. Several studies have demonstrated that RPM implementation in PD programs is associated with reduced hospitalization rates, shorter hospital stays, and lower overall healthcare costs. Furthermore, the growing adoption of telemedicine following the COVID-19 pandemic has accelerated acceptance of RPM as an essential component of modern home dialysis care. In addition to clinical benefits, RPM may improve patient quality of life by increasing confidence and reducing anxiety associated with home treatment. Patients often report feeling more secure knowing that their treatment data are continuously reviewed by their care team. This reassurance may support broader utilization of PD and contribute to patient-centered kidney care. In conclusion, RPM represents a significant advancement in peritoneal dialysis management by enabling proactive, data-driven, and patient-centered care. Through improved adherence monitoring, early complication detection, enhanced communication, and healthcare efficiency, RPM has the potential to optimize clinical outcomes and strengthen the sustainability of home dialysis programs worldwide

Keywords: peritoneal dialysis, CKD, remote patient monitoring, sharesource, MyPD