PD First Policy: Thailand's Response to the Challenge of Meeting the Needs of Patients With End-Stage Renal Disease

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Summary: Providing dialysis for end-stage kidney disease (ESKD) patients nationwide in a developing country such as Thailand is challenging. Even after roll-out of the Thai Universal Coverage Scheme in 2002, treatment for ESKD was not covered and patients struggled to afford dialysis. There was an urgent need to improve financial risk protection for patients with ESKD. Advocacy by nephrologists, health economists, and civil society seeking equity in access to dialysis, and responsiveness from policy makers, led to the methodical development of the Peritoneal Dialysis (PD) First policy and marked a turning point in ESKD care in Thailand. Despite the obvious economic concerns and the prevailing popularity of hemodialysis the policy has been strategically and successfully implemented since 2008. The Thai PD First policy has saved the lives of nearly 50,000 ESKD patients being dialyzed under the universal coverage scheme. Despite ongoing challenges the program continues to evolve. This article summarizes the key strategies underlying the policy development and implementation, the integration of home-based dialysis into the well-established Thai health care system, the use of the Chronic Care Model concept in PD care, and the impact of choosing PD as the first choice of dialysis therapy, which has slowed the growth of dialysis costs.

Keywords: Peritoneal dialysis, PD First policy, Chronic Care Model, universal health care coverage

Thailand is a country with a population of 67.9 million, located close to Myanmar, Laos, Cambodia, and Malaysia in Southeast Asia, and is classified by the World Bank as a middle-income country.[1] The health care system in Thailand has evolved over the past century along with the development of infrastructure throughout the country, especially during the 1970s and 1980s. During this time, along with the expansion of secondary and tertiary health services, the concept of primary health care has emerged as a foundation of the Thai health system, along with the establishment of almost 10,000 health centers and more than 1 million village health volunteers. Improvements in key health indicators such as the decrease in infant mortality from 68 to 13 per 1,000 live births between 1970 and 2008 show the success of the system.[2]

The Thai health system introduced the universal coverage scheme (UCS) in 2002. The initial UCS benefit package did not include renal replacement therapy (RRT) because of the expected huge budget impact of these high-cost services.[3,4] Patients who develop end-stage kidney disease (ESKD) need RRT, including hemodialysis (HD), peritoneal dialysis (PD), and kidney transplantation to survive and maintain a decent quality of life. At the time of the UCS rollout, only two public insurance schemes, namely the Civil Servant Medical Benefit Scheme and the Social Security Scheme, provided RRT for their beneficiaries; the total proportion of RRT coverage was approximately one quarter of the Thai population (Table 1). This inequity in access to RRT remained after implementation of the UCS in 2002. Before the inclusion of RRT in the UCS, health care workers were faced with difficult situations of having to inform the average ESKD patient that they could not survive unless they could afford to pay out-of-pocket for life-saving RRT. Many patients could not access RRT and died, and those who attempted to pay for dialysis experienced a significant financial burden.[5]

Given the struggles of less-well-off patients with ESKD under the UCS, a group of leading Thai nephrologists approached researchers at the Health System Research Institute of Thailand to seek financial measures to cover the cost of RRT for this population. In response to these advocacy efforts, a deliberate fact-finding exercise was conducted to inform policy development around RRT. This process has been well documented and included investigation of the potential demand for RRT, the cost-utility of RRT compared with palliative care and other unrelated cost-effective treatments, a survey of strategies used by policy makers to inform their decisions, a survey of public opinion about the need for and willingness to pay for RRT, and the quantification of the financial hardships

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Table 1. Thailand Health Care Coverage Schemes and Renal Replacement Therapy Reimbursement

Scheme	Civil Servant Medical Benefit Scheme	Social Security Scheme	Universal Coverage Scheme
Date introduced	1960	1990	2002
Beneficiaries	Government employees and dependents, retirees	Private sector employees	Rest of population
Population coverage	6 million (9%)	10 million (16%)	48 million (75%)
Funding	Government budget	Payroll contribution Tri-parties	Government budget
Payment to health facilities	Fee-for-service, reimbursement	Capitation	Capitation and DRG**
Renal replacement therapy* reimbursement	Fully reimbursed* before 2008	Fully reimbursed* before 2008	No reimbursement before 2008

*Kidney transplantation, hemodialysis, and peritoneal dialysis.
**Diagnosis Related Groups.

experienced by existing RRT patients.[4,6,7] Persistent advocacy from socially accountable groups including the Nephrology Society of Thailand, the Thai Kidney Foundation, and ongoing engagement with other stakeholders including dialysis providers, researchers, and patients' groups, the National Health Security Office, a governing body of the UCS, pushed the process forward.[3,6] In 2007, a policy was introduced to provide PD as the first option of therapy for ESKD patients (the PD First policy) in Thailand, based on the facts that PD was cheaper than HD, required fewer staff, and could be performed by the patients at home with minimal infrastructure, with the goals of achieving equity in access to RRT across the three health-funding schemes and extending financial risk protection to patients with ESKD.[4,8] This policy attempted to address the issues raised by multiple stakeholders including the deep concern about both the financial solvency (budget impact) of the UCS and the nonfinancial consequences for the Thai health system (shortage of nurses). The Thai PD First policy was implemented in January 2008. Since implementation, almost 50,000 patients have gained access to RRT under the PD First policy, and outcomes of the care are comparable with internationally acceptable standards.[9]

Initial resistance to the PD First policy was put forward by some nephrologists stating that PD was inferior to HD.[8] Many studies from around the world have compared outcomes associated with in-center HD (ICHD) and PD using observational data. These data suggest that there is no significant difference in overall patient survival between ICHD and PD.[10–12] In terms of quality of life, the evidence also showed that there is no significant difference between HD and PD, although PD patients tend to have better quality of life.[13,14] Economically, accumulating evidence also suggests that PD is a cost-saving therapy compared with ICHD in most developed countries and in some developing countries.[15–17] The utilization of PD varies globally and seems not to solely reflect the views of nephrology professionals and the preference of patients and caregivers.[18–20] In Australia, Canada, The Netherlands, New Zealand, most of Scandinavia, and the United Kingdom, where dialysis is provided by the government, utilization of PD is higher (20%-30%) and is propagated as the cheaper modality.[21] HD predominates in Japan, the United States, Germany, Belgium, and most Southern European countries where dialysis often is provided by the private sector.[22] The latter was the prevalent situation in Thailand at the time of introduction of the PD First policy. Given that ICHD was well established and growing at the time of introduction of the PD First policy in Thailand, implementation of the policy was very challenging.

The objectives of the PD First policy are to increase access to dialysis and transplantation for ESKD patients who are under the UCS, to prevent financial collapse of the patients, and to minimize the impact on the overall national health care budget. Initially, the policy introduced full reimbursement for PD and kidney transplantation. Therapy costs were reimbursed only partially for patients who elected to start with HD before launching the PD First policy. However, if there was any contraindication to PD based on criteria established by the Nephrology Society of Thailand, and decided upon by committees at regional and national levels, HD costs could be fully reimbursed. If, however, a patient started with PD, but later because of any medical or social problems with the therapy they needed to shift to HD, their costs would continue to be fully reimbursed. The indications for shifting to HD are set up by the Nephrology Society of Thailand and regional committees are authorized to make the decision. Over time, the policy has been revised and patients who started HD before launching this policy now also are fully reimbursed, but those who elect to start HD since the launch of the policy must pay out of pocket under the UCS. To contain the costs it is important that most patients start with PD first,