**Supplementary Table 1.** Components of HD quality assessment

| Domains | | HD quality assessment (12 measures) | Equation |
|---|---|---|---|
| Structural | Personnel | Percent of doctors specialized in HD | [Σ (employed days of each doctor specialized in HD)/Σ (employed days of each doctor)] × 100 |
| | | Percent of nurses with ≥ 2-year experience in HD | [Σ (employed days of each nurse with ≥ 2-year experience in HD)/Σ (employed days of each nurse)] × 100 |
| | | Number of HD performed per doctor per day | Total number of HD/Σ (working days of each doctor) |
| | | Number of HD performed per nurse per day | Total number of HD/Σ (working days of each nurse) |
| | Equipment | Satisfaction with the minimum required number of isolated HD equipment for hepatitis B patients | Minimum required number of isolated HD equipment = number of hepatitis B patients/[(3 × days of nocturnal HD)+(2 × days of day-time HD)]/3 |
| | | Availability of emergency equipment in the HD room | Emergency equipment: $O_2$ supply, suction, endotracheal intubation kit, electrocardiogram, defibrillator |
| | Facilities | Satisfaction with the minimum required frequency of water quality tests | Minimum required frequency of tests<br>- Bacteriological assay: monthly, 1/12 of total HD equipments<br>- Endotoxin assay: every 3 months<br>- Chemical assay: annually |
| Procedural | HD adequacy | Satisfaction rate of the minimum required frequency of HD adequacy test | [Number of patients satisfied with the minimum required frequency of HD adequacy test/total number of ambulatory HD patients] × 100<br>- Minimum frequency: every 3 months |
| | Vascular access | Satisfaction rate of the minimum requirement for vascular access stenosis monitoring | [Number of patients satisfied with the minimum required frequency of vascular access stenosis monitoring/total number of ambulatory HD patients] × 100<br>※ Monitoring methods<br>- Monthly: static intra-access pressure ratio, ultrasound dilution technique, duplex ultrasonography, angiography<br>- Weekly: physical exam of vascular access |
| | Regular tests | Satisfaction rate of the required frequency of regular laboratory tests | [Number of patients satisfied with the minimum required frequency of regular laboratory tests/total number of ambulatory HD patients] × 100 |
| Monitoring | spKt/V | Satisfaction rate of HD adequacy | [Number of patients satisfied with HD adequacy/total number of HD patients tested for HD adequacy] × 100<br>- HD adequacy: spKt/V ≥ 1.2 or URR ≥ 65% |
| | Mineral bone disorder | Satisfaction rate of calcium × phosphorus | [(The number of patients with calcium × phosphorus < 55)/total number of HD patients tested for calcium and phosphorus during the assessment period] × 100 |

HD, hemodialysis; spKt/V, single-pool Kt/V; URR, urea reduction ratio.