

## 적절한 투석을 위한 CQI: 적절한 투석을 위한 다면적 접근

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- II. 투석관련 질 지표 현황
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### I. 양질의 의료 개념

#### Definition of quality of health care

**Do the right things,  
in a right way ....**

#### Definition of quality of health care

◆ Institute of Medicine, 1990

the degree to which health services for individuals and populations increases

the likelihood of desired health outcomes and

are consistent with current professional

knowledge

6 goals of IOM to improve quality of health care

1. Safety
2. Effectiveness
3. Patient-centeredness
4. Timeliness
5. Efficiency
6. Equity

## Problems in quality

- Overuse
- Under-use
- Misuse

## Components of quality of health care

- Technical quality
- Doctor-patient relationship
- Amenity

## Different perceptions

- Practitioners
  - Degree to which care meets the current technical state of the art.
  - Freedom to act in the full interest of the patient.
- Consumers
  - Degree of symptom relief.
  - Level of functional improvement.
  - Communication, concern, courtesy.
- Purchasers
  - Appropriate use of health care resources.
  - Maximum possible contribution of health care to reduction in lost productivity.

## What are measures of quality?

### 1. structure:

- attributes of the settings in which care occurs.

Material resources: facilities, equipment

Human resources:  
No. and qualifications of personnel

Organizational structure:  
medical staff org, peer review method,  
reimbursement method

## What are measures of quality?

### 1. structure:

good structure

--> good quality of process

## What are measures of quality?

### 2. Process

What is actually done in giving and receiving care

- practitioner's activities in making a diagnosis and recommending or implementing treatment
- patient's activities in seeking care and carrying it out

## What are measures of quality?

### 2. Process

good quality of process  
--> good outcome

## What are measures of quality?

### 3. outcomes: What is accomplished for patients

Clinical Outcomes:  
morbidity, mortality, re-admissions

Functional status:  
mobility, pain level, return to work

Service quality:  
patient & referring MD  
satisfaction, wait times, etc.

Efficiency:  
LOS, cost per case

## What are measures of quality?

### \* Quality indicators:

the case of Johns Hopkins Hospital

- in-hospital mortality rate
- mortality rate of infants ( $\geq 1,800g$ )
- re-admission rate within 30 days after discharge
- rate of patients with ER stay  $\geq 6$  hours
- post-operation wound infection rate
- cancel rate of outpatient operation
- rate of medication error

## II. 투석관련 질 지표 현황

### 1. 국가적 접근

1. 미국:
  - USRDS: ESRD registry and database
  - Medicare ESRD HCQIP since 1994:
    - use clinical guideline to define the process of care that are closely associated with patient outcomes and subject to variation
  - ESRD network
  - Dialysis facility-specific performance measures
2. 우리 나라
  - 심사평가원 적정성 평가
    - 혈액투석 적량도 검사
    - Serum albumin
    - Hematocrit
    - 혈압

## 2. 투석관련 질 지표 현황

Table 1. High-priority quality indicators for dialysis care<sup>a</sup>

Dialysis process measures	Comorbidity process measures	Outcomes/intermediates
Dialysis adequacy	Lipid management	Standardized mortality rate
Vascular access (fistula to graft to catheter)	Glycemic control	Standardized hospitalization rate
Target haemoglobin/beta-tasitrit	Diabetic foot care	Standardized rehospitalization rate
Mineral metabolism (phosphorus, calcium, parathyroid hormone)	Secondary cardiovascular prevention	Quality-adjusted life years
Nutritional status		Patient safety
Infection rates		Patient satisfaction

출처: Himmelfarb J et al. *Annual Review of Medicine*. 2007;58:387-399

## <Clinical performance target of renal dialysis by ESRD quality study>

- Albumin:  $\geq 4.0$ g/dl
- Hemoglobin:  $\geq 11$ g/dl
- Calcium-phosphate product:  $< 55$ mg<sup>2</sup>/dl<sup>2</sup>
- Dialysis dose: Kt/V  $\geq 1.2$
- Vascular access type: fistula

출처: Plantinga et al. *BMJ Health Services Research*. 2007;5:7

## 3 quality measures among 12 dialysis facility-specific measures released by CMS in U.S.

Facility measure
% patients who received adequate HD (defined as a URR $> 85\%$ )
% patients on Eprelvi whose anemia was adequately managed (defined as hematocrit $\geq 33\%$ )
Patient survival categories: reported as expected, better than expected, worse than expected

출처: Friedberg PR et al. Developing dialysis facility-specific performance measures for public reporting. *Health Care Financing Review*. 2002;22(4):37-49

## III. CQI / TQM

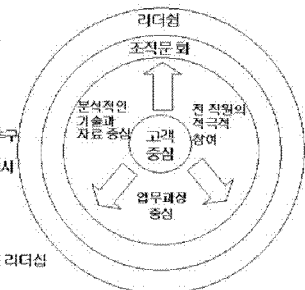
## Continuous Quality Improvement

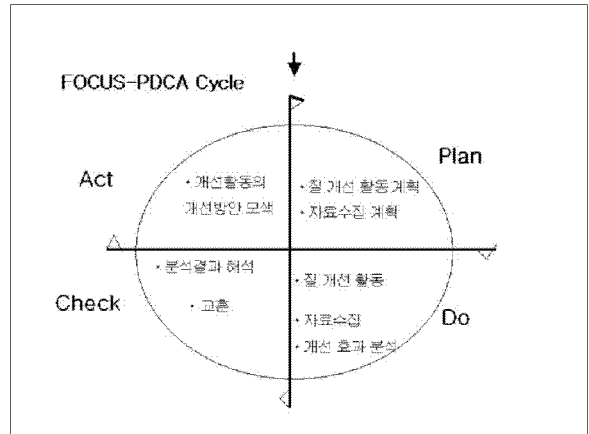
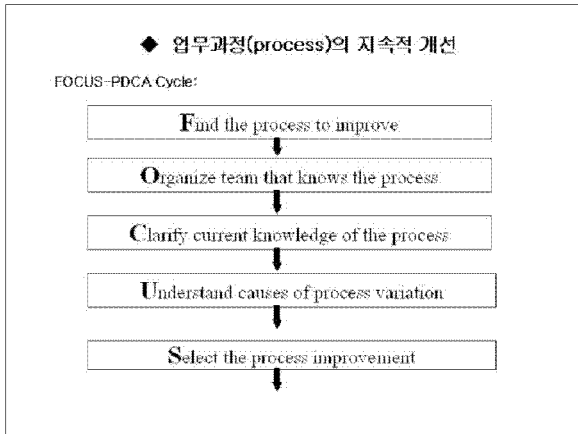
### 정의:

고객의 욕구를 충족시킬 수 있는 의료서비스를 생산하기 위하여 전 직원들의 적극적인 참여 속에 과학적인 방법을 이용하여 지속적으로 업무과정을 개선해 가는 과정

### ▪ TQM/CQI의 개념

- 고객중심의 사고
- 과정에 대한 지속적 개선 추구
- 조직원의 참여와 창의성 증진
- 과학적인 방법 활용
- 조직구조, 문화 변화 추구
- 질 중심의 변화를 추구하는 리더십

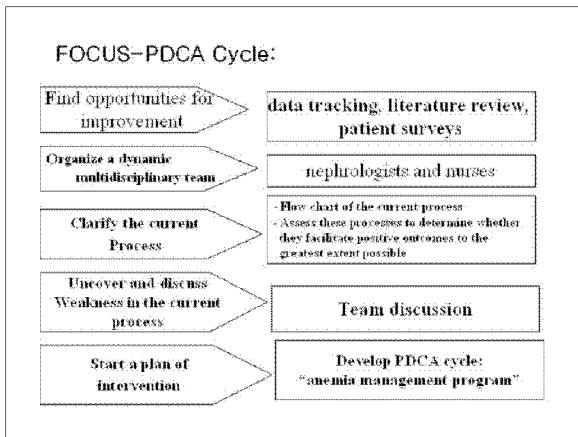




투석의 clinical performance를 향상시키기 위한 CQI 활동 사례

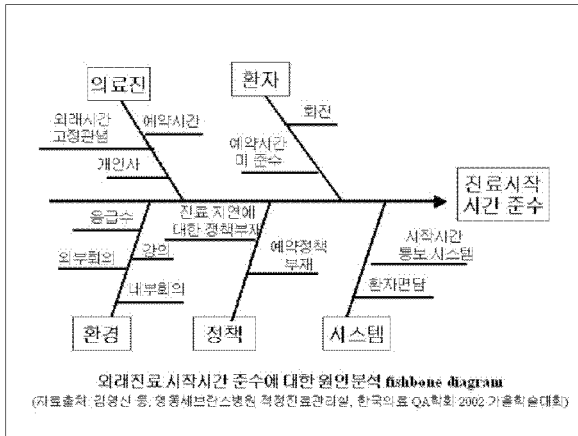
Chen et al. "Improving the management of anemia in hemodialysis patients by implementing CQI program" Blood Purification 2006;24:282-286.

1. Find a process to improve  
(질 개선이 시급한 업무과정 선정하기)
- 질 개선 대상 발견
    - 환자만족도 조사결과, 직원만족도 조사결과
    - 적정성 평가 기준
  - 질 개선 대상의 우선순위 정하기:
    - 질적 문제가 대두되는 서비스 영역은 많으나, 이를 개선하는데 요구되는 인적, 물적 자원은 제한되어 있음
    - 따라서, 질 개선이 시급하고, 질 개선 효과가 두드러진 대상영역을 선정하는 것은 중요한 과제



2. Organize team that knows the process  
(업무과정을 잘 아는 사람들로 팀 구성하기)
- 효과적인 팀이 되기 위해서는 다음 세 영역에 대한 전문가가 각각 1명 이상 팀 구성원에 포함되어야 함
- System leadership
  - Technical expertise
  - Day-to-day leadership

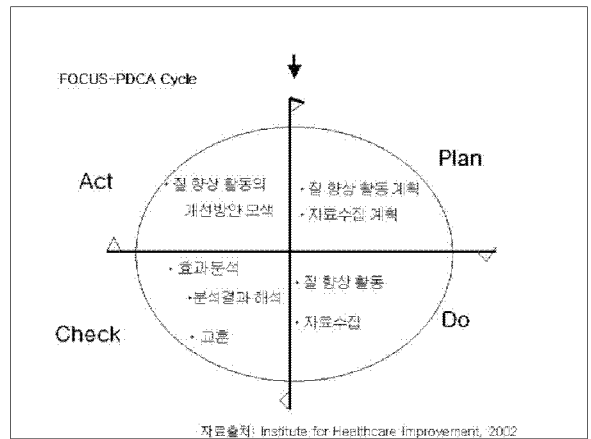
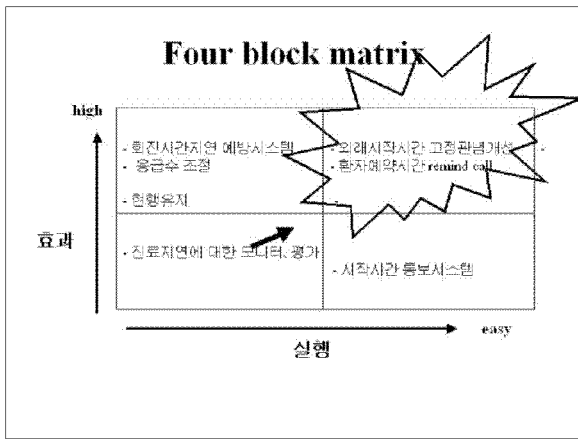
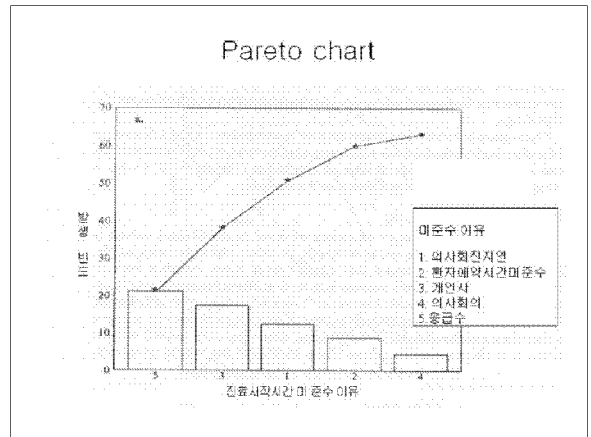
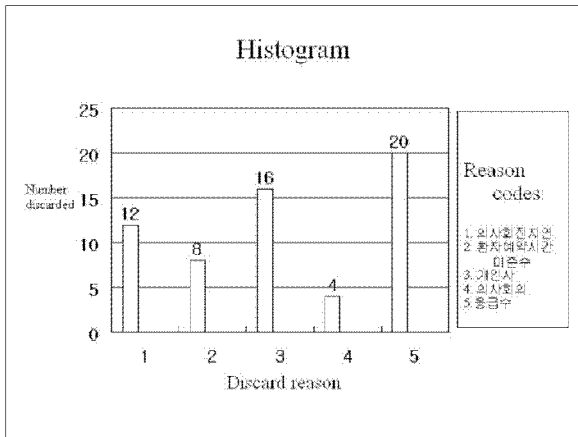


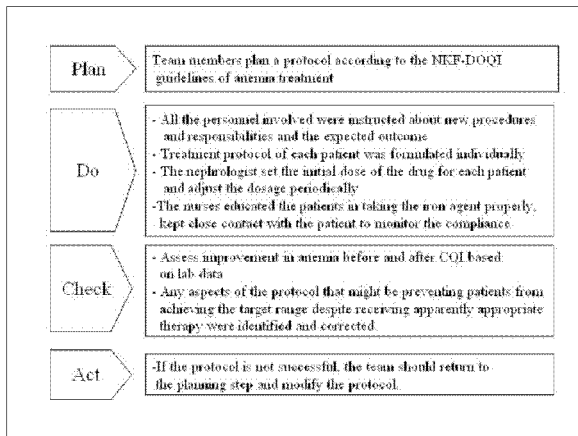


### Check sheet

Week of \_\_\_\_\_

Reason	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
의사 회진 지연	5	1		2	3		1	12
환자예약시간 미준수			4	1	2	1		8
개인사	2	2	1	7	1	2	1	16
의사회의	2	1		1				4
응급수	3	5	2	5	1		1	20
Total	17	9	7	14	7	3	3	60





**Table 1. Hemodynamic parameters before and after CQI**

	Before CQI (6 months)	100 months	After CQI (178 months)
Patient with Hb < 10 g/dL, n	42 (15.6%)	57 (20.9%)	60 (21.5%) <sup>a</sup>
Hb (g/dL)	101.2 ± 18.76	119.8 ± 18.07	116.6 ± 14.13**
Serum ferritin, ng	28.0 (7.78)	51.1 (46.94)	113.5 (49.67)
St. agent	177.0 (17.3)	129.0 (40.7)	428.1 (48.7)
Transferrin saturation, %	16.0 (8.5)	26.4 (8.7)	24.2 (10.5)
Dose of iron per 100 mg week	205.2 ± 22.1	191.0 ± 26.0	194.0 ± 25.2

Figure in parentheses indicate the number of patients of the total number of patients. Values of St. agent, transferrin saturation and ferritin are expressed as median, and minimum and maximum values in brackets.  
Abbreviations: Hb = hemoglobin, St. agent, transferrin saturation, %/100.  
<sup>a</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001, compared with values before CQI.