Process of End Stage Renal Failure Management

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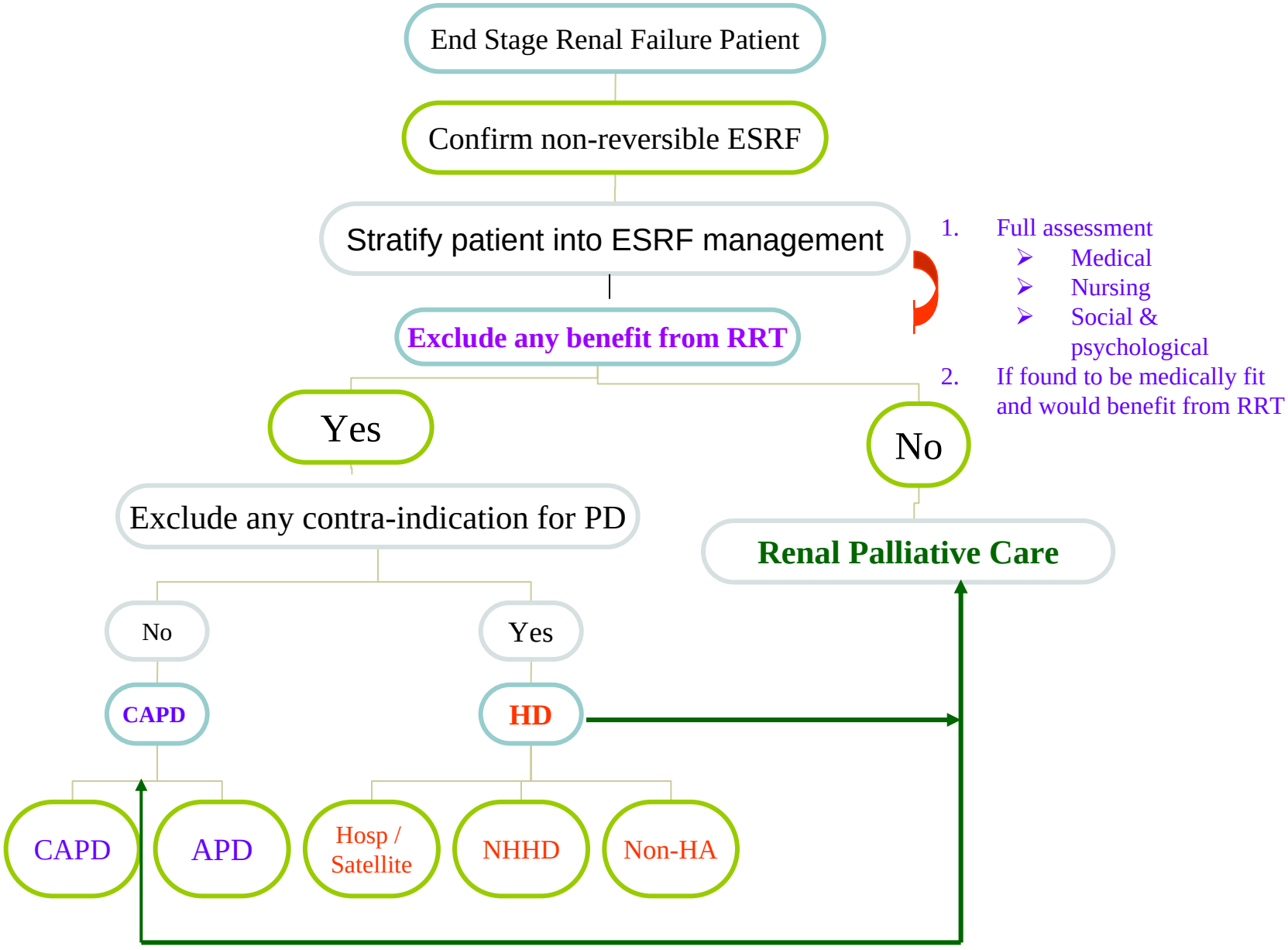
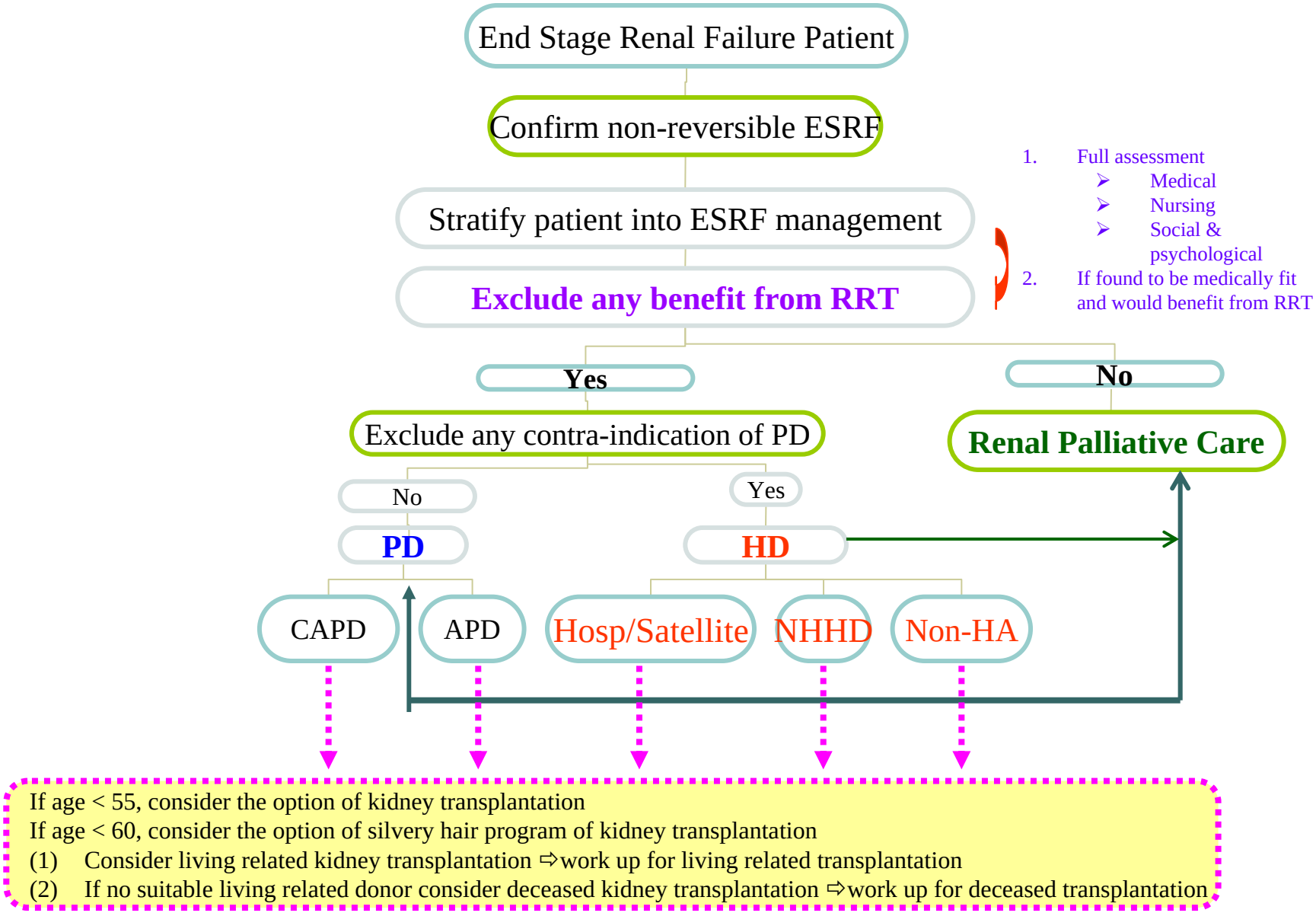
Outlines of management of End Stage Renal Failure

- Identify patients require renal care:
  - renal replacement therapy
  - palliative care
- Stratify patients in different category of renal replacement therapy
  - Peritoneal dialysis
  - Haemodialysis
  - Renal transplantation
- Promote different level of self care through individual interventions (patient empowerment)
- Clinical parameters of different treatment modality



Clinical Guidelines & Outcome Indicators For The Management of End Stage Renal Failure, Hospital authority 2003



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Interdisciplinary Collaboration Care Team

- Nephrologist, surgeon, radiologist
- Nursing
- Allied health
  - Medical social worker
  - Dietitian
  - Physiotherapist
  - Occupational therapist

Renal replacement therapy

Patient selection

Patient selection

"Any patient with ESRF who is medically fit and would benefit from renal replacement therapy should be considered and given the options of such therapy"

Age, financial status, hepatitis status are not absolute limiting factors

Clinical Guidelines & Outcome Indicators For The Management of End Stage Renal Failure,
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Criteria for accepting patients into renal replacement programs for better patient outcome

- Not suffering from concomitant disease with very poor prognosis (e.g. malignancy, CVA, cardiac disease)
- Social and psychiatric considerations
  - No severe psychiatric illness
  - Good family support
  - Ability to cooperate
  - Compliant and motivated for long term dialysis

Clinical Guidelines & Outcome Indicators For The Management of End Stage Renal Failure, Hospital authority 2003

Contraindications for peritoneal dialysis

- Documented loss of peritoneal function
- Extensive abdominal adhesions that restrict dialysate flow as a result of previous CAPD/APD, extensive abdominal surgery, pelvis irradiation or peritonitis
- Uncorrectable mechanical defects that prevent effective peritoneal dialysis e.g. persistent peritoneal-pleural communication, surgical irrepairable abdominal hernia

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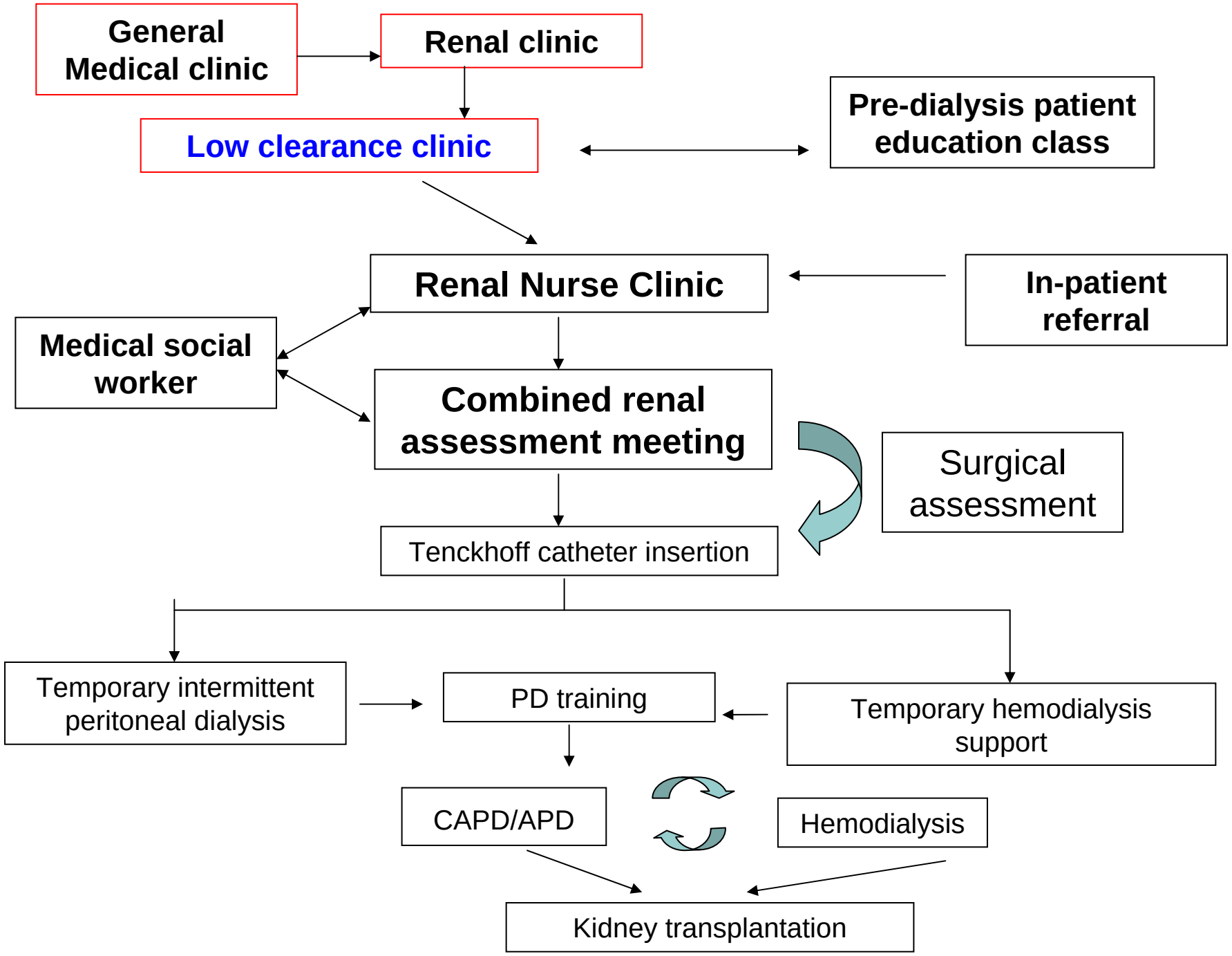
General Medical clinic
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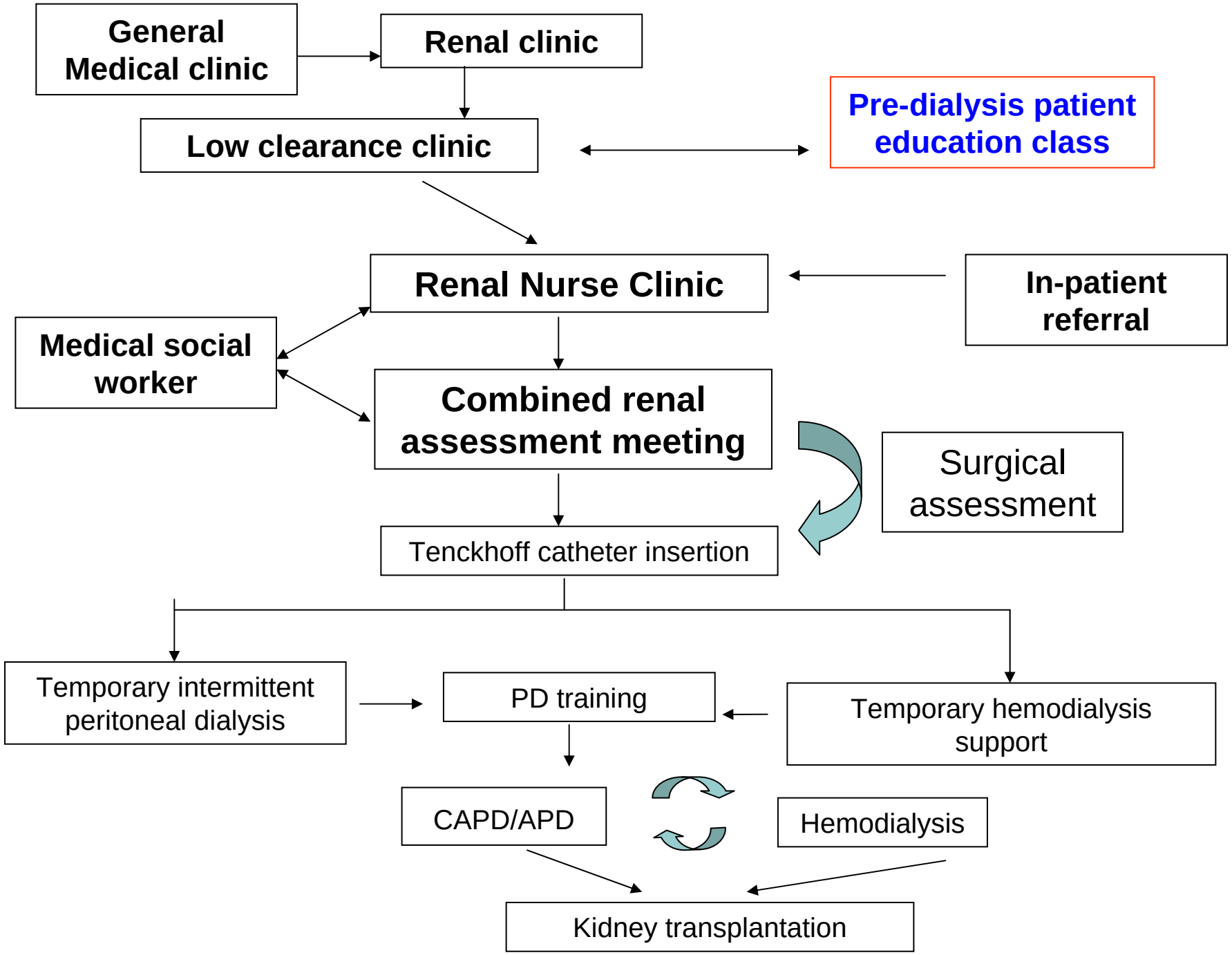
Low clearance clinic
Pre-dialysis patient education class
Renal Nurse Clinic
In-patient referral
Medical social worker
Combined renal assessment meeting
Surgical assessment
Tenckhoff catheter insertion
Temporary intermittent peritoneal dialysis
PD training
Temporary hemodialysis support
CAPD/APD
Hemodialysis
Kidney transplantation

Low clearance clinic

- Generally referred when GFR < 30 ml/min (stage IV-V) or serum creatinine ~ 300 umol/L

- Nephrologist assessment
  - Pre-dialysis program
  - Introduction of different modes of renal replacement therapy including renal palliative care
  - Formulation of dialysis plan
  - Blood pressure control
  - Calcium-phosphate management
  - Anemia
  - Dietary advice on sodium, phosphate and protein intake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Care prior to initiation of dialysis

- Timely referral
- Patient involvement in election of treatment modality
- Appropriate management of uraemic complications:
  - Fluid and electrolyte abnormalities
  - Metabolic acidosis
  - Renal osteodystrophy
  - Hypertension
  - Anaemia
- Timely placement of dialysis access
- Pre-dialysis education
- Timely initiation of dialysis

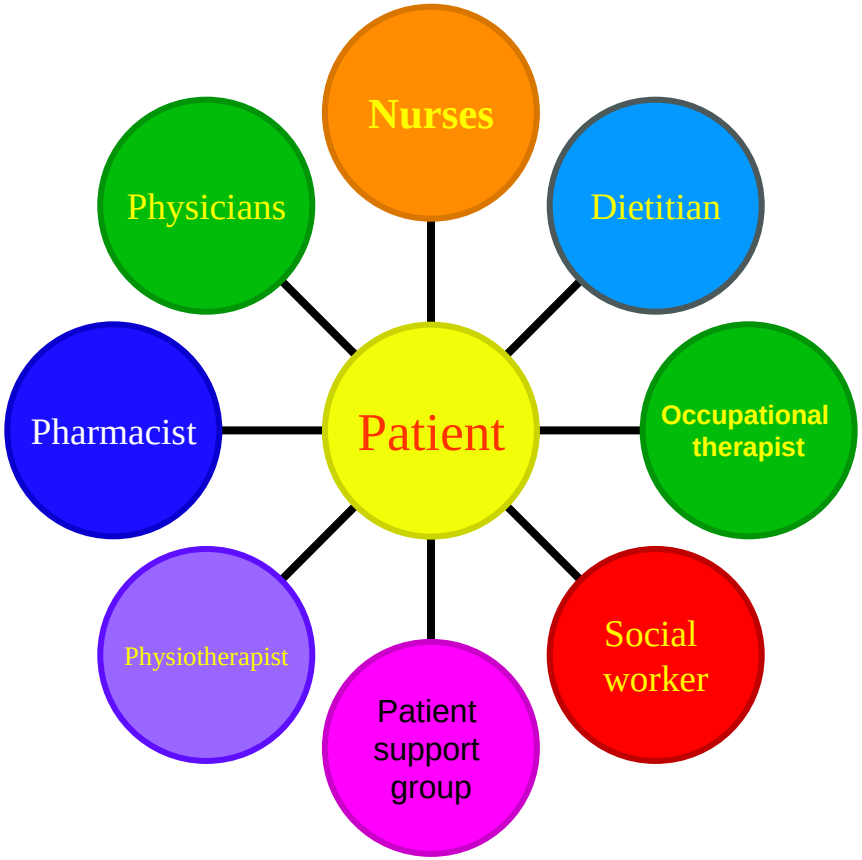
*Patient / significant others active participation in planning of care

An essential process for facilitating patients' physical and psychosocial adaptation to end stage renal failure treatment

Pre-dialysis education

Pre-dialysis education

A structured pre-dialysis multidisciplinary team program



Objectives of pre-dialysis education

- Better understanding of the disease
- Facilitating patients' physical and psychosocial adaptation to end stage renal disease treatment
- Alleviating anxiety associated with impending treatment
- Providing information for informed decision making
- Identify signs and symptoms of impending problems can seek help and avoid complications that may lead to hospital admissions
- Be aware of available support services (patient support group, social workers)
- Improving quality of life in patients with end-stage renal disease (ESRD)

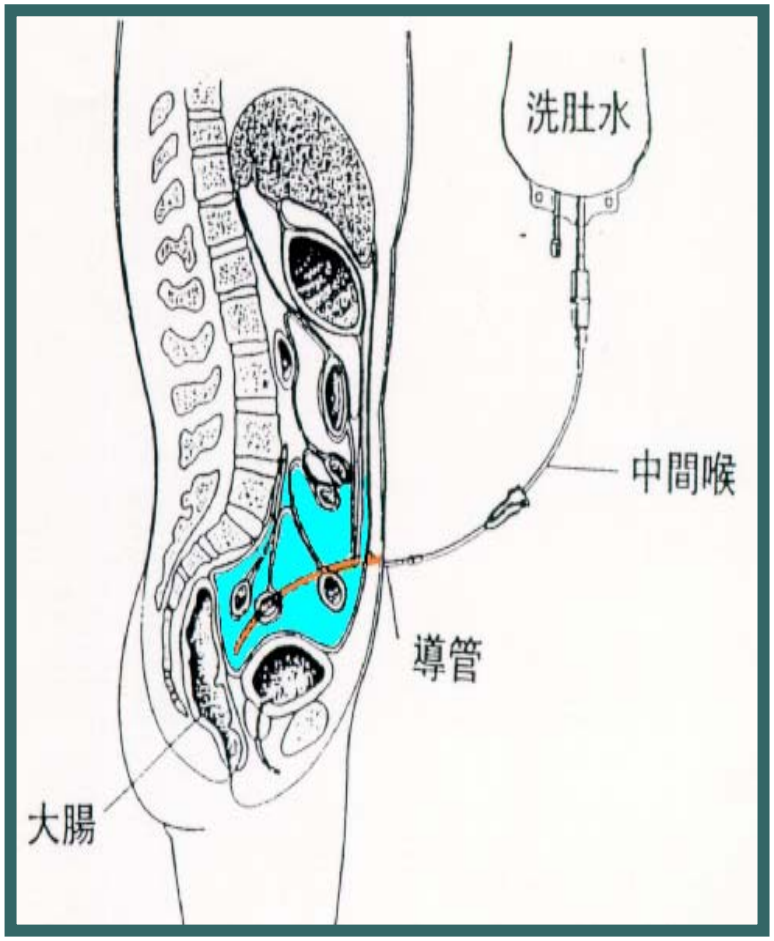
Pre-dialysis education program

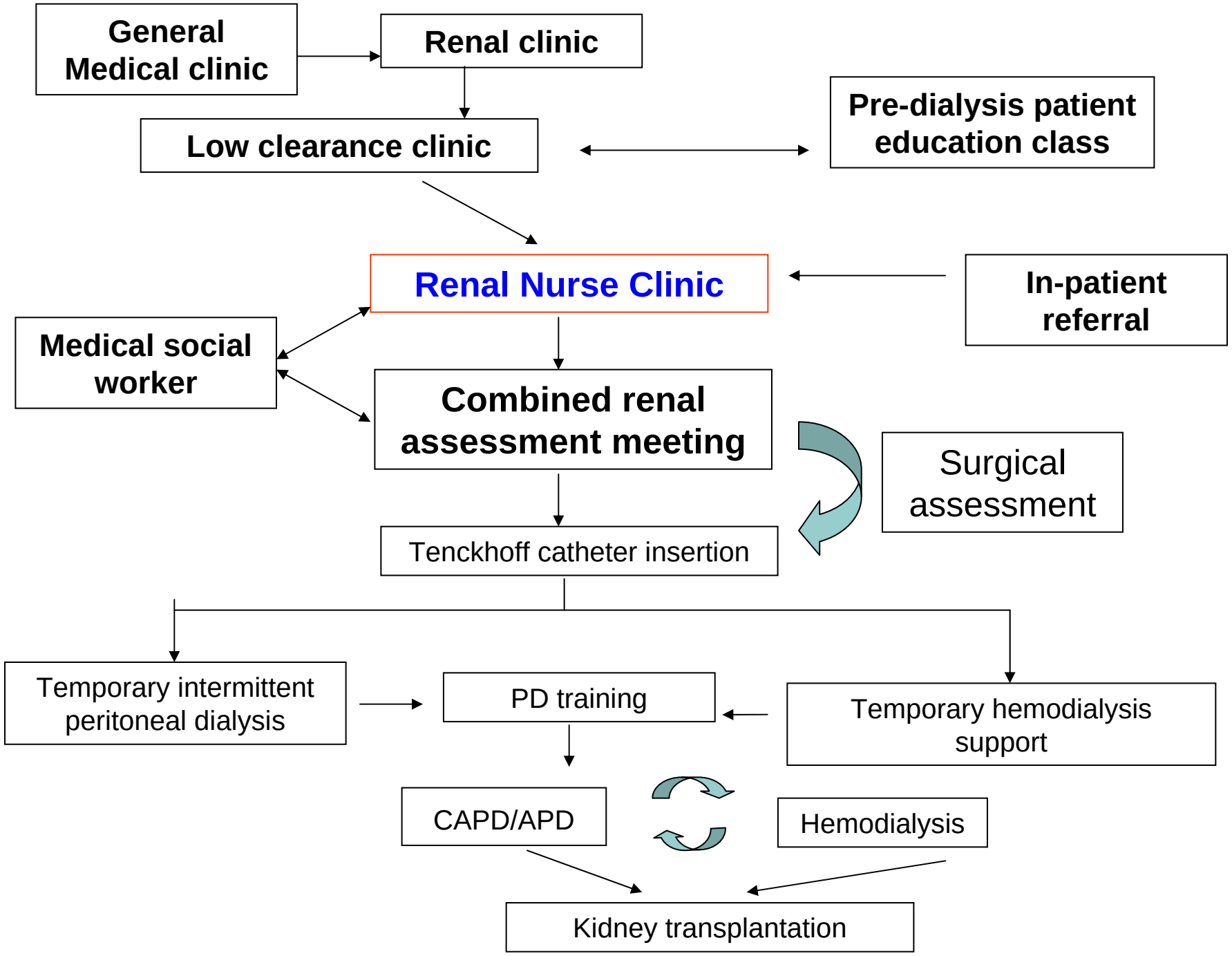
- ⇩ 6-8 IPD sessions provide during the break in period
- ⇩ the need of acute haemodialysis
- ⇩ CAPD training days from 10-12 days to 5-6 days

Pre-dialysis education program

- Better patient outcomes:
- Decrease of peritonitis rate
- Decrease of unplanned readmission
- Decrease of hospitalization
- Decrease of health cost

Peritoneal dialysis

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Assessment of Patient

- Physical
- Psychological
- Social
- Financial
- Mode of therapy

Pre-dialysis assessment (1/2)

- Health history : medical, surgical, traumatic injuries, drug / food allergy
- Physical assessment
- Habit & daily living:
  - diet compliance
  - Appetite
  - activity level
  - sleep problem
  - smoking/alcohol/herbs
  - personal hygiene

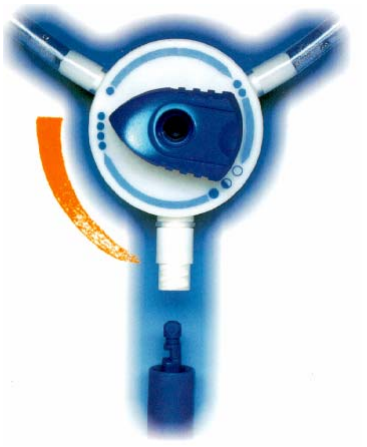
Pre-dialysis assessment (2/2)

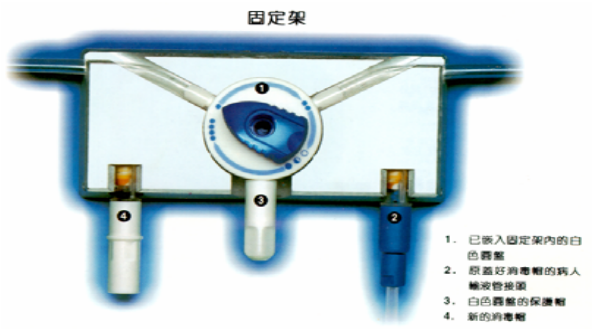
- Coping:
  - Social history
  - Living environment
  - Education
  - Occupation
  - Financial support
  - Activities of daily living
- Patient’s perception of illness and dialysis
- Patient’s / significant others’ response
- Nursing plan

Co-ordination and arrangement of dialysis access

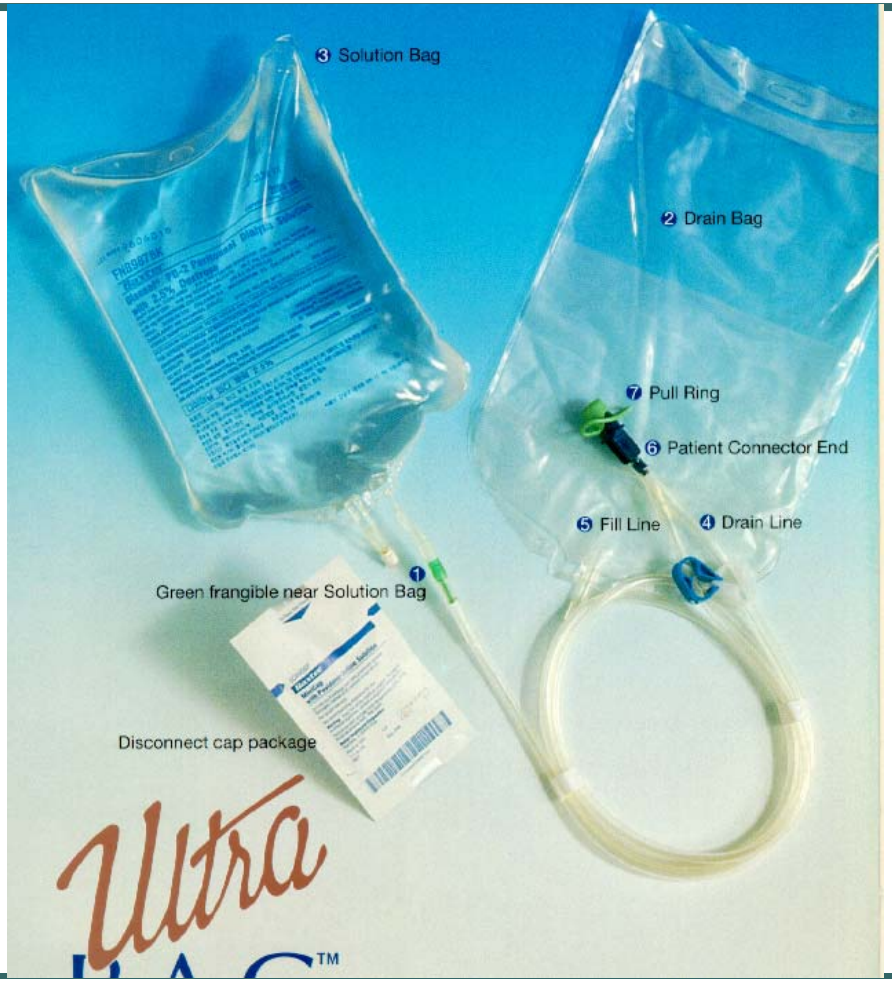
- Combined surgical and nephrology and surgical consultation
- Pre-operative management
  - With-hold Warfarin / Aspirin
  - Correction of anaemia
  - Base-line of renal / liver function test, platelet etc
  - Prophylactic medication

Andy disc

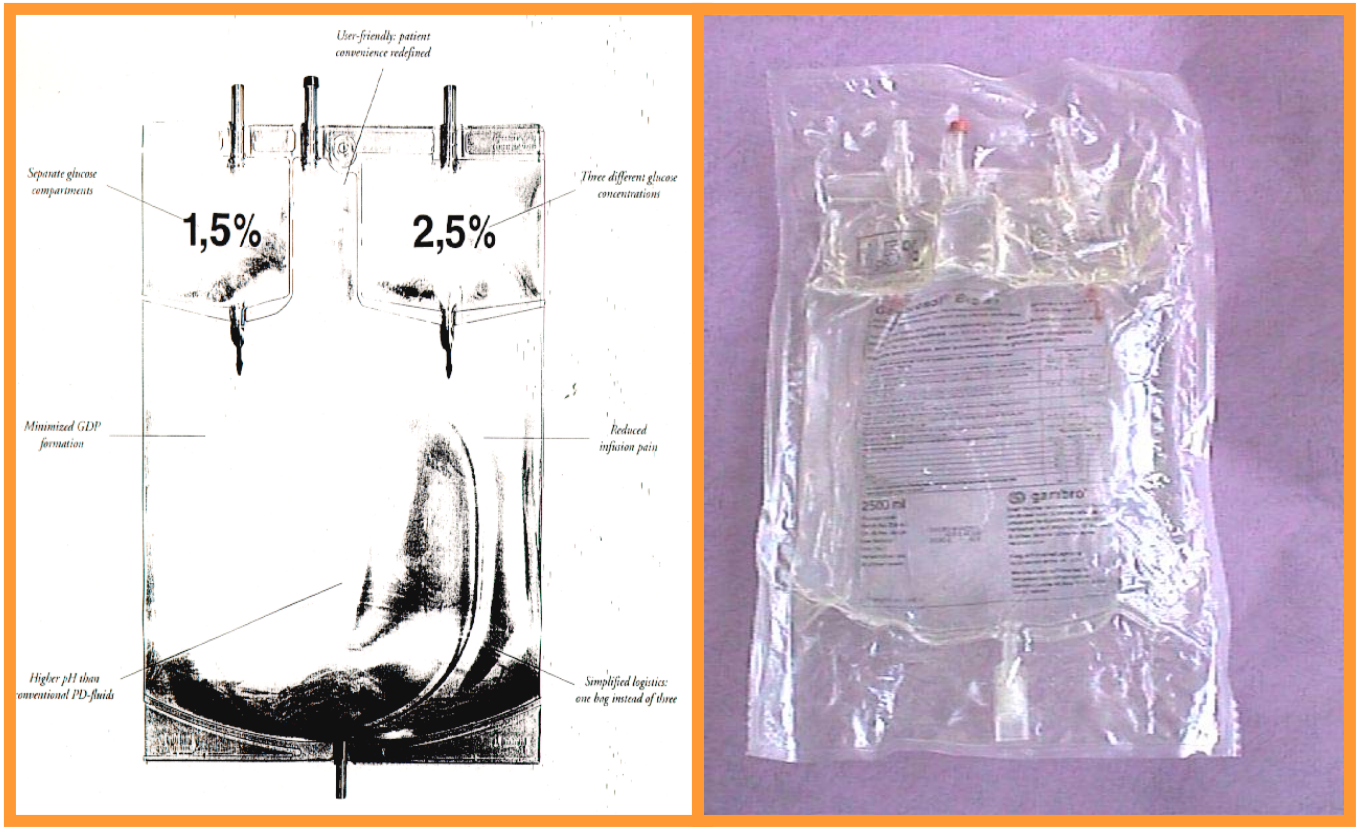




Ultra bag


❸ Solution Bag
❷ Drain Bag
❼ Pull Ring
❻ Patient Connector End
❺ Fill Line
❹ Drain Line
❶ Green frangible near Solution Bag
Disconnect cap package
Ultra

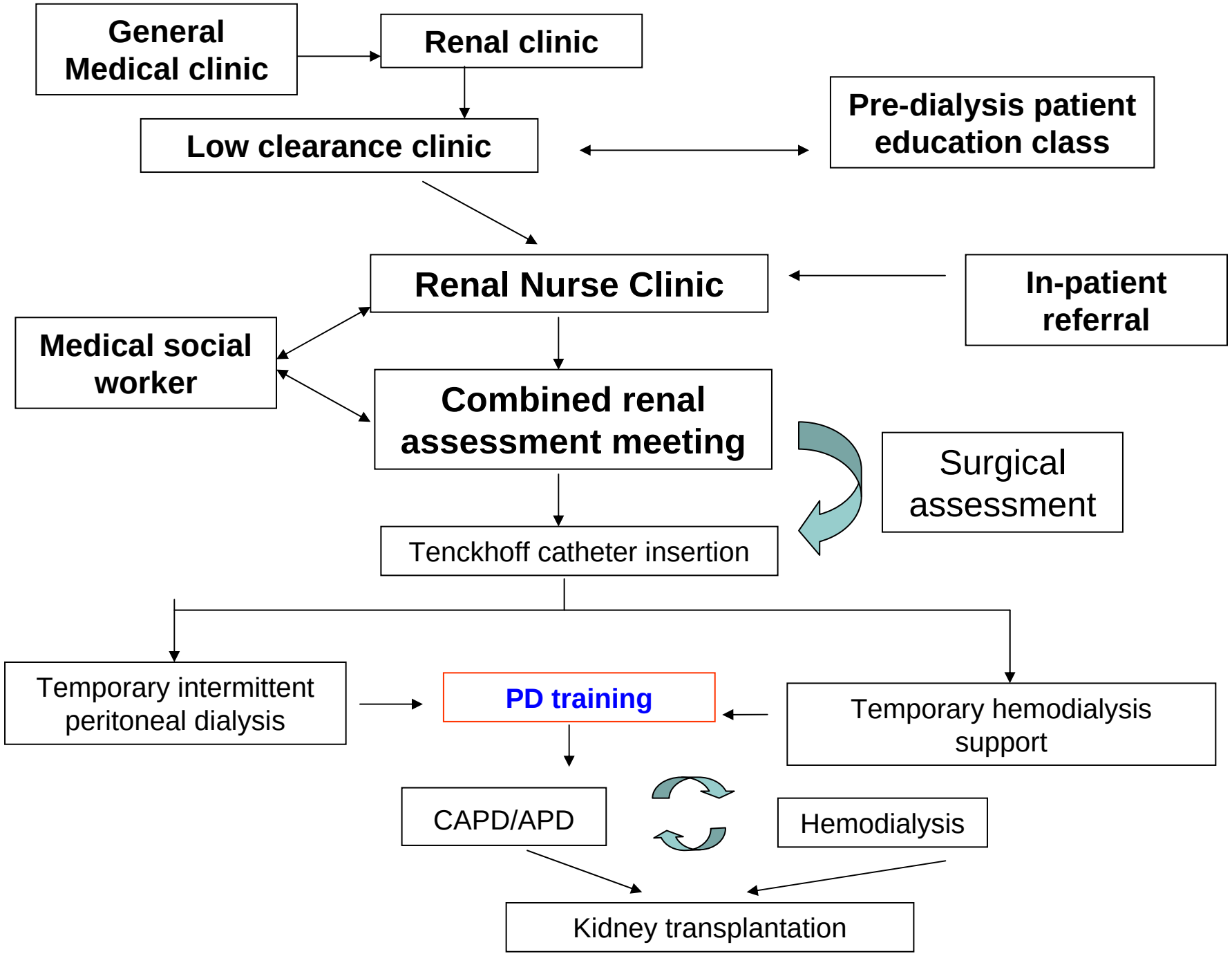
Gambrosol Trio



Ultra-violet system

Different peritoneal dialysis systems

- Reduce peritonitis rate
- Cost effective
- Convenience
- Meet individual needs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PD Training

4 weeks after the insertion of Tenckhoff Catheter

Patient empowerment

- Theoretical
- Practical skill

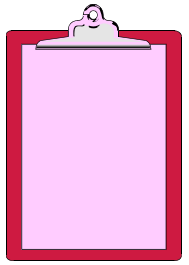
Patient education

- Assess patient's ability and readiness to learn
- Identify specific teaching and learning activities
- Apply different teaching aids
- Plan for evaluation

CAPD Training Program

Patient Self Management Training: Skills training

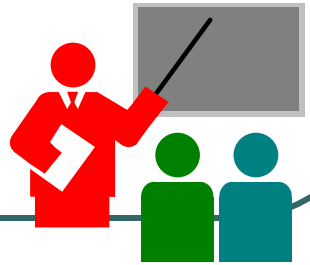
- Training protocol, teaching manual, patient education material
- Training content:
  - Theoretical
  - Technical skill of :-
    - Exchange of PD fluid
    - Tenckhloff catheter exit site care
    - Trouble shooting measures
    - Addition of intra-peritoneal drugs



Training of Home-based PD

Theoretical Content

- **Preparation of accessories of PD therapy**
- **Course of ESRD**
- **Principle of PD**
- **Concept of clean and sterile**
- **Environment for PDF exchange**
- **Warming of PDF**
- **Monitor and record of dialysis profile, vital signs**
- **Treatment regime**
- **Potential complications**
- **Disposal of wastes**
- **Drug and dietary compliance**
- **Exercise**
- **Fluid balance**
- **Readjustment of daily life style**
  - Simulation of trouble shooting of complications of PD
  - Emergency measures
- **Ordering of PD accessories**
- **Follow up**



Patient Education

Patient teaching package

- CAPD Information CD-ROM developed in 2001
- 病患者教育系列- 慢性腎病 CD-ROM developed by Renal Specialty Core Group in 2005
- Standardize information
- Pamphlet

Upon the completion of training

- Desired standard of knowledge and skill achieved
- All required PD accessories prepared and available for use
- Home visit arranged

Evaluation of training

- **Knowledge**
- **Application of trained skill**
  - Exchange of PDF
  - Care of exit site
  - Trouble shootings measures
- **Motivation / attitude**
- **Capability**

Home visit

- **Assessment of home setting**
- **Application of trained skill**
  - Exchange of PD solution
  - Care of exit site
  - Trouble shootings measures
- **Provide valuable insights** about:
  - family interactions
  - degree of self-care
  - supply inventory and storage
  - general management of health
  - drug compliance
  - dietary practice
  - motivation / attitude / emotional adjustment

Follow up care

- Frequent monitoring, assessment, guidance and support
- Clinical visits : nursing assessment & further teaching arrangement
- Routine clinic activities:
  - Review of home record
  - Monitor vital signs
  - Assessment of fluid balance, catheter exit
  - Physical examination
  - Review of blood chemistries & haematology
  - Evaluate activity level & rehabilitation status

Liaison with extended term care facilities

e.g. nursing home

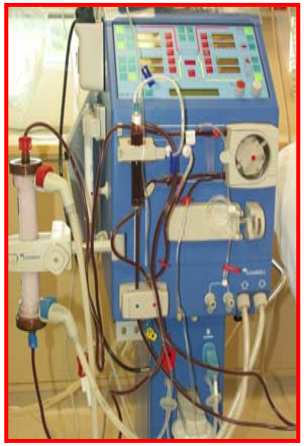
- Aging and co-morbidities of dialysis patient increase
- PD program taught to staff of nursing home
- Education similar to that applied for patient
- Continuous education and support provided

Outcome parameters for CAPD

- Patient survival rate
- Technique survival rate
- Peritonitis rate (episodes/ patient-month)
- Exit site infection rate
- Hospitalization rate (dialysis/ non-dialysis related)
- Anemia
- Adequacy and nutrition (KT/V, weekly creatinine clearance, albumin)
- Blood pressure control

Haemodialysis

- Information of haemodialysis
- Nursing assessment
- Arrangement of vascular access and haemodialysis therapy
- Patient empowerment :
  - Vital signs monitoring
  - Drug / diet compliance
  - Style of living
  - Care of vascular access
  - Emergency interventions
  - + Operation of machine (NHHD)
  - + cannulation of vascular access (NHHD)
- Arrangement of FU and laboratory screening
- Arrangement of non-schedule follow up
- Provision of telephone hot-line

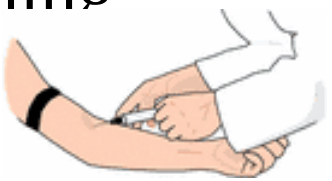


Outcome parameters for haemodialysis

- Patient survival rate
- Vascular access infection rate
- Hospitalization rate (dialysis/ non-dialysis related)
- Anemia
- Blood pressure control
- Adequacy and nutrition (KT/V, weekly creatinine clearance, albumin)

Renal transplantation

- Arrangement of education program for potential kidney donor and recipient
- Provision of living-related renal transplantation information
- Arrangement of operation and related care
- Provision of pre- and post-operative care
- Reinforcement of subsequent self-care
- Arrangement of FU and laboratory screening
- Arrangement of non-scheduled FU
- Provision of telephone hot-lines



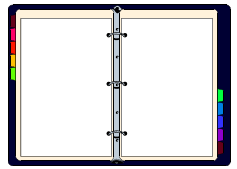
Renal transplantation

Patient empowerment

- Drug

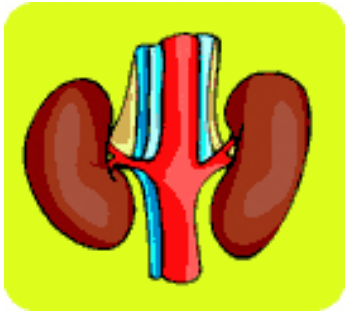
- Personal hygiene
- Exercise

- Diet
- Style of living
- Self monitoring : vital signs, signs and symptoms of graft rejection



Outcome parameters for renal transplantation

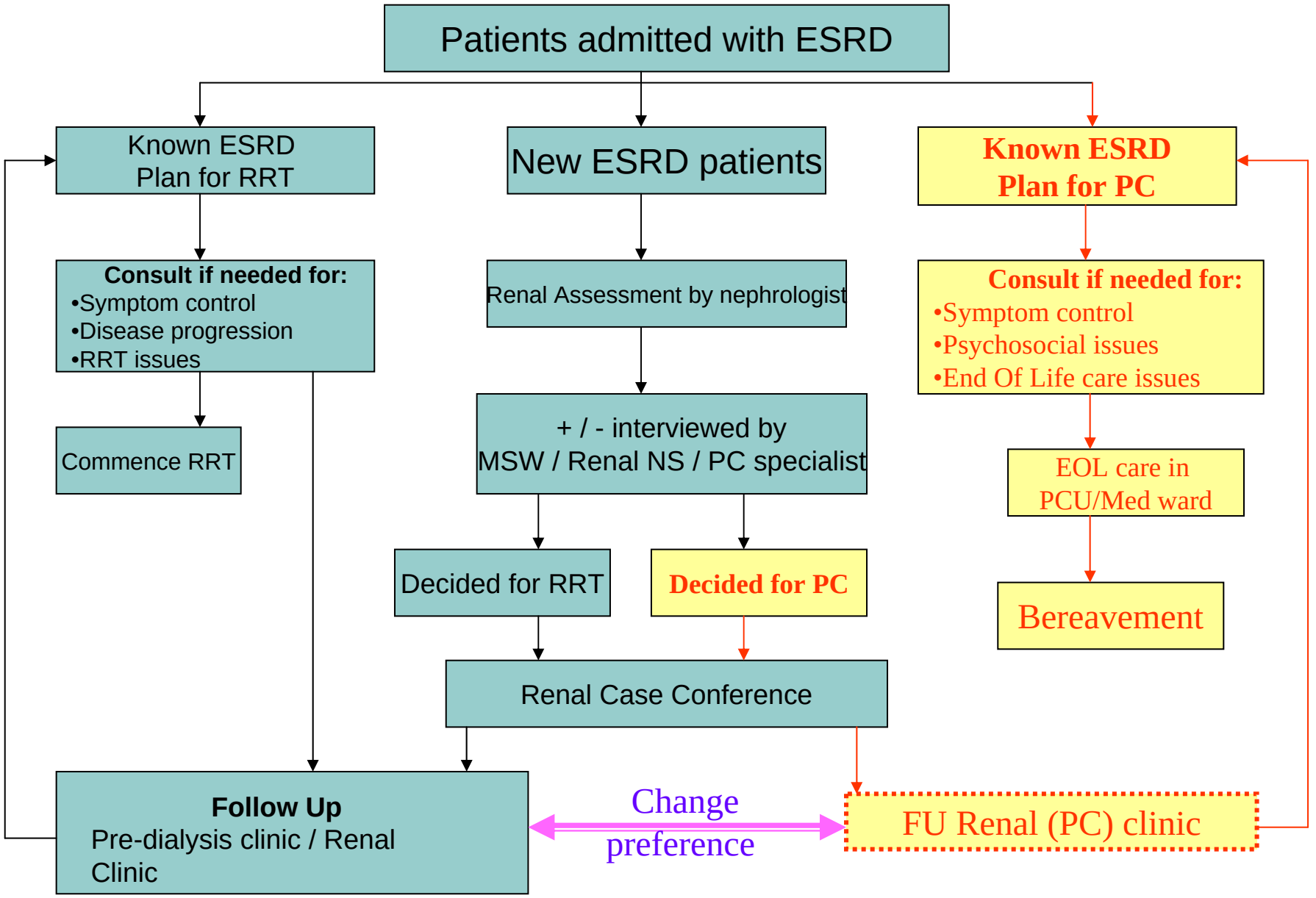
- Patient survival rate
- Graft survival rate
- Graft rejection episode
- Hospitalization rate
- Blood pressure
- Anaemia



Renal Palliative Care

腎臟紓緩治療

Pathway for patients with palliative care

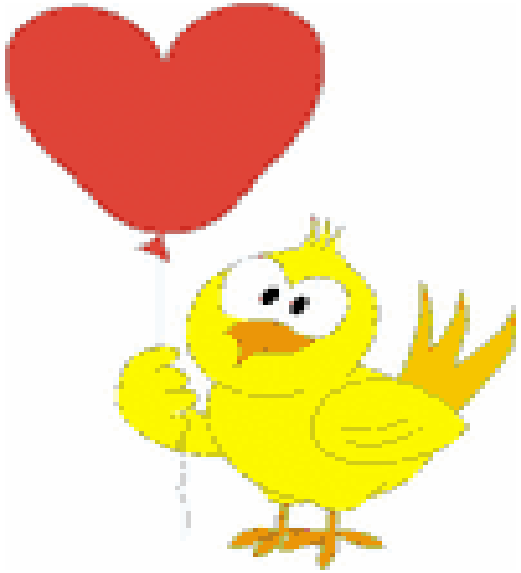


Supportive measures

- Telephone hotline

- Special arranged medical consultation

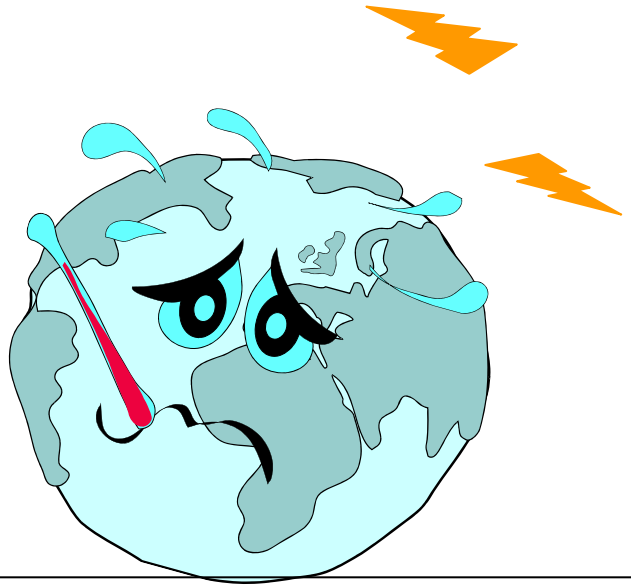
Summary



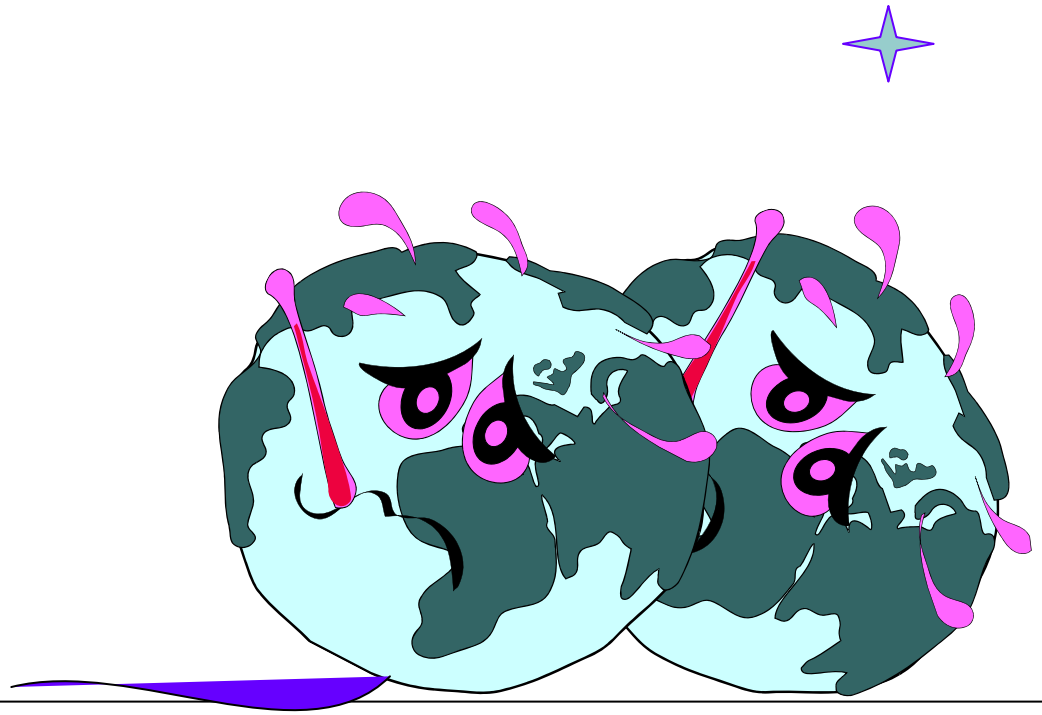
在比賽球場內,壘球需要向前進

無缺陷的壘球，可以順利向前進

可惜有一天，在壘球身上發生問題，舉步艱難難難難.....



有缺陷的壘球可要面對障礙、缺陷、多種困難……等

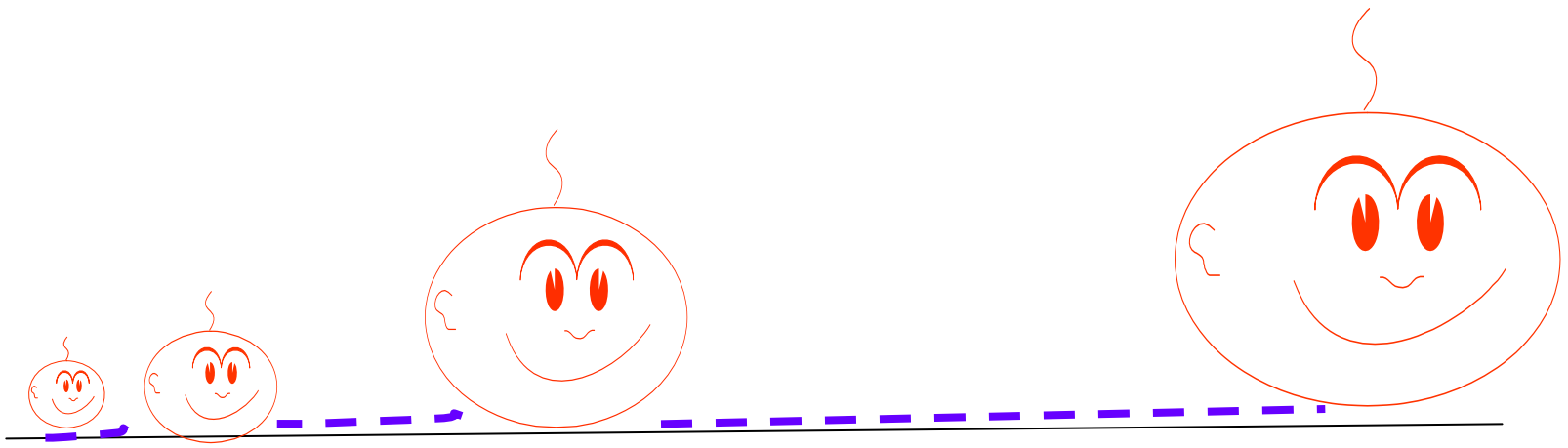


依據法、理和情

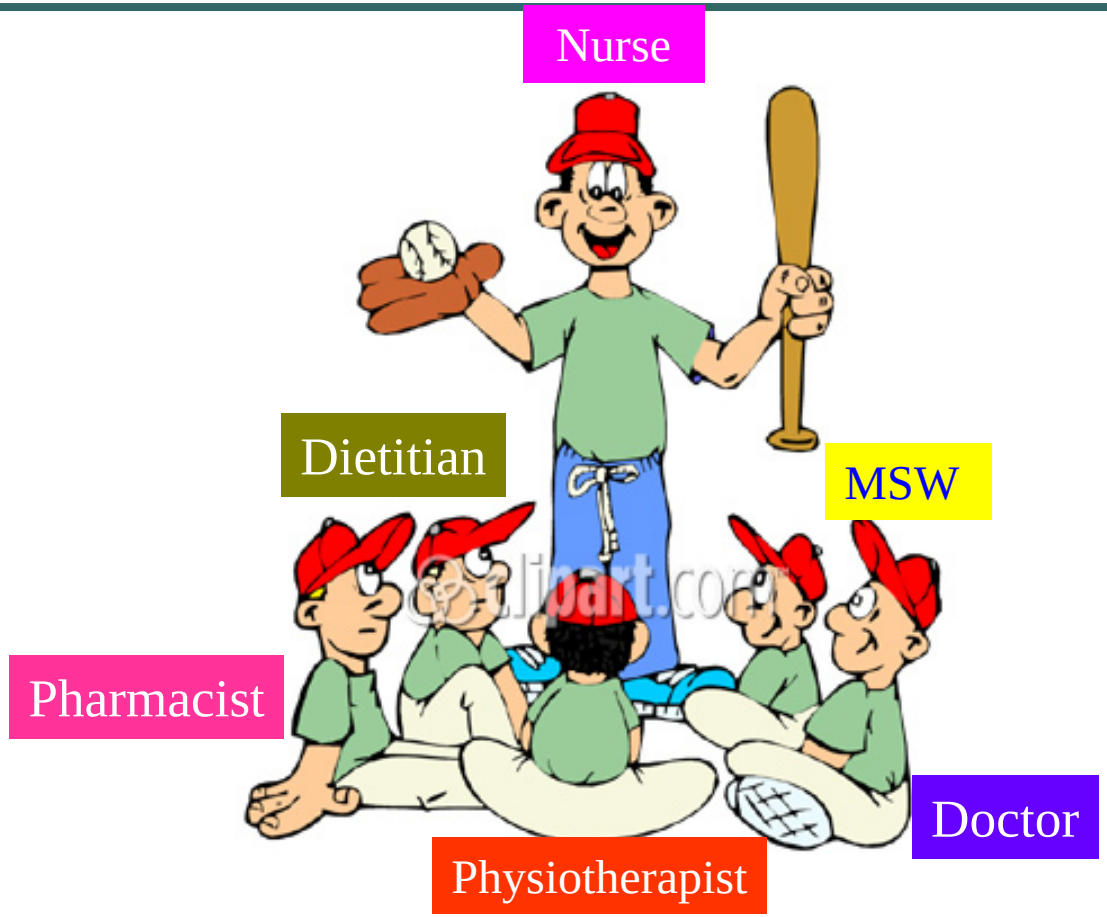
藉著各方的默契、技術、能耐和協調.....

壘球的障礙減少，缺陷得到改善

經過各方努力，壘球仍然可以向前進



壘球可以繼續前進，有賴各組的專業、協作、足夠溝通……等



The End


THANK
YOU