



# RENAL SHARED CARE FOR EARLY CHRONIC KIDNEY DISEASE PATIENTS- CHALLENGES AND OPPORTUNITIES



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# Overview

- Rationale for Shared Care
- Getting Started
- Processes in setting up Shared Care
- Overcoming Challenges
- Recruiting Family Physicians
- Piloting the Renal Shared Care Programme
- Difficulties Encountered
- Moving Forward



# Rationale for Shared Care

- SGH Renal Department outpatient casemix
  - 29% chronic kidney disease (CKD) 1 and 2 patients
  - 10, 000 consultations per year based on 2005 data
- International guidelines<sup>1</sup> suggest CKD 1 and 2 patients can be adequately managed by trained family physicians
- They only require oversight by renal physicians and occasional specialist input
  
- The Shared Care Program aims to provide:
  - More convenient and holistic community-based care
  - Free up tertiary resources to manage more complex disease<sup>2</sup>

<sup>1</sup>UK CKD Guidelines and US K/DOQI Guidelines

<sup>2</sup> Median patient waiting time for an appointment in SOC Apr-June 2007 is 22 days; 95th percentile of waiting time was 129 days (SGH Quarterly Statistics). 56.7% patients waited  $\leq$  42 days.

# Getting Started

- A work group was thus set up in Mar 2006 to look into setting up a viable shared care programme between the Renal department and Family Physicians (FPs) with these considerations in mind:
  - Patient care is not compromised
  - Financial implications to patients
  - Convenience to patients
  
  - Bridge the disparity in the share of chronic disease management between public and private sectors



# Processes in setting up Shared Care

- Recruitment of FPs
- Training of FPs
- Selection of patients
- Delivery of care



# Recruitment of Family Physicians

- Reach out to diverse group of FPs with different business models
  - Established group practices
  - Solo FP practices with good technology infrastructure
  - Managed health care groups
- FPs should not charge more than \$21 for consultation
- FPs participating in Shared Care should be willing to provide regular updates of patients' clinical indicators to the Renal physicians



# Training of Family Physicians

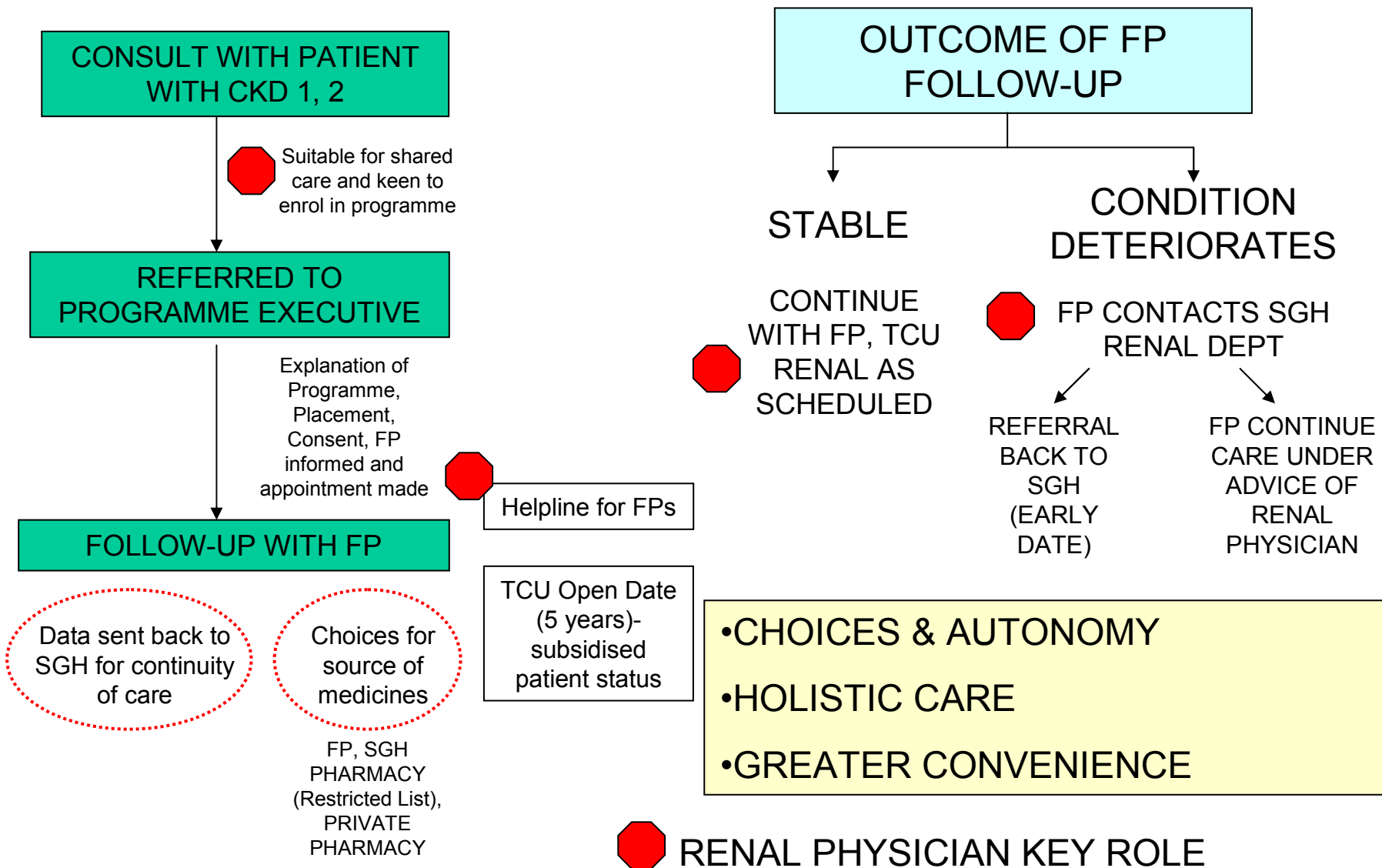
- The Renal department in SGH will plan regular courses and to update participating FPs on the management of CKD and the possible complications



## Selection of Patients

- Renal physicians will identify CKD 1 and 2 patients with stable diseases who are suitable for shared care
- Special projects executive will match the patient with FPs most convenient to the patient for follow-up and register patient under the particular FP

# Delivery of Care





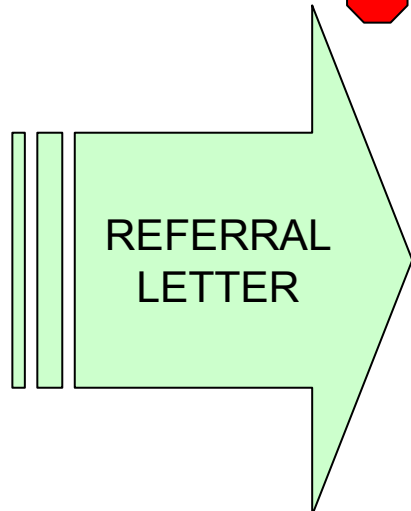
# Overcoming Challenges

- Information sharing
- Provision of renal medications



# Information Sharing

- This is critical in maintaining continuity of patient care
- FPs and nephrologists alike will update each other on patients' progress via a memo with a summary of the results of the clinical indicators monitored as well as any change in management.



### Renal Right Siting Programme

Name:  
 NRIC:  
 Age:  
 SGH Consultant In-charge:  
 Drug Allergy:

**CKD Staging:**

**History:**

**Physical examination:**

**Management plan:**

Investigations:	Date:	Result:	Target:
Weight			
Blood pressure			
Early morning spot urine protein/creatinine ratio			
Serum Creatinine			
Serum Potassium			
Corrected Calculated GFR			
HbA1C <7%			

**Current medications:**

## References:

Table 2 Proposed classification of chronic kidney disease by the US K/DOQI group

Stage	Description
1	Normal GFR; GFR >90 mL/min/1.73 m <sup>2</sup> with other evidence of chronic kidney damage*
2	Mild impairment; GFR 60-89 mL/min/1.73 m <sup>2</sup> with other evidence of chronic kidney damage*
3	Moderate impairment; GFR 30-59 mL/min/1.73 m <sup>2</sup>
4	Severe impairment; GFR 15-29 mL/min/1.73 m <sup>2</sup>
5	Established renal failure (ERF); GFR <15 mL/min/1.73 m <sup>2</sup> or on dialysis (for CKD Stage 5 we have adopted the term established renal failure instead of end-stage renal disease or end-stage renal failure, as this is the term used in the National Service Framework for Renal Services).

\* Other evidence of chronic kidney damage may be one of the following: persistent microalbuminuria; persistent proteinuria; persistent haematuria (after exclusion of other causes, eg urological diseases); structural abnormalities of the kidneys demonstrated on ultrasound scanning or other radiological tests (eg polycystic kidney disease, reflux nephropathy); or biopsy-proven chronic glomerulonephritis (most of these patients will have microalbuminuria or proteinuria, and/or haematuria).

GFR Ref

## Monitoring of Clinical Indicators

Clinical Indicators	Frequency
Weight	3 monthly
Blood Pressure	3 monthly
Proteinuria	3 monthly
Early morning spot urine protein/creatinine ratio	3 monthly
Serum Creatinine	3 monthly and during acute illness
Serum Potassium	3 monthly and during acute illness
Corrected Calculated GFR	3 monthly
HbA1C <7%	3 monthly
Lipid profile	At least 6 monthly if on lipid lowering drugs

Frequency for monitoring of indicators

## Guidelines for early referral

Clinical Indicators	Triggers for Renal Consultation
BP <130/80 mmHg	>2 visits BP ≥150/90 despite treatment with 3 complementary medications
Proteinuria	>1g/ 2+ on dipstick
Early morning spot urine protein/creatinine ratio	>100mg/mmol
Serum Creatinine	20% rise compared with previous visit
Serum Potassium	> 5.5 mmol/L
Corrected Calculated GFR	Fall in GFR >15%
HbA1C <7%	

Reference: UK CKD guidelines Mar 2006

## Referral Workflow

- Contact SGH mainline at 6222-3322. Request to speak to the Renal Registrar on-call. If you are unable to contact the Registrar on-call, you may request to speak to the Renal Consultant on-call.

Urgent referral workflow

Guidelines for early referral



**Renal Right Siting Programme**

Name: \_\_\_\_\_ Weight: \_\_\_\_\_  
 NRIC: \_\_\_\_\_ Height: \_\_\_\_\_  
 Age: \_\_\_\_\_ BMI: \_\_\_\_\_  
 SGH Consultant In-Charge: \_\_\_\_\_

Date of visit (dd/mm/yy)	Blood Pressure		Chronic Kidney Disease					Glucose	Lipids	Lifestyle	Smoking	Annual Assessment For DM	
	Systolic BP	Diastolic BP	Proteinuria	u. Prot/Cr	sCr	sK	GRF	HbA1c (%)	LDL (mg/dL) / (mmol/L)	Weight (kg)	Average no.cigs/day	Eye (✓)	Foot (✓)
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## Provision of Renal Medications

- Differential drug pricing between subsidized SGH pharmacy rates and private pharmacies
- Prescriptions filled by participating FPs will be filed with SGH Pharmacy
- SGH pharmacy processes orders and dispenses the medications directly to patients
- Patients will continue to receive subsidized health care

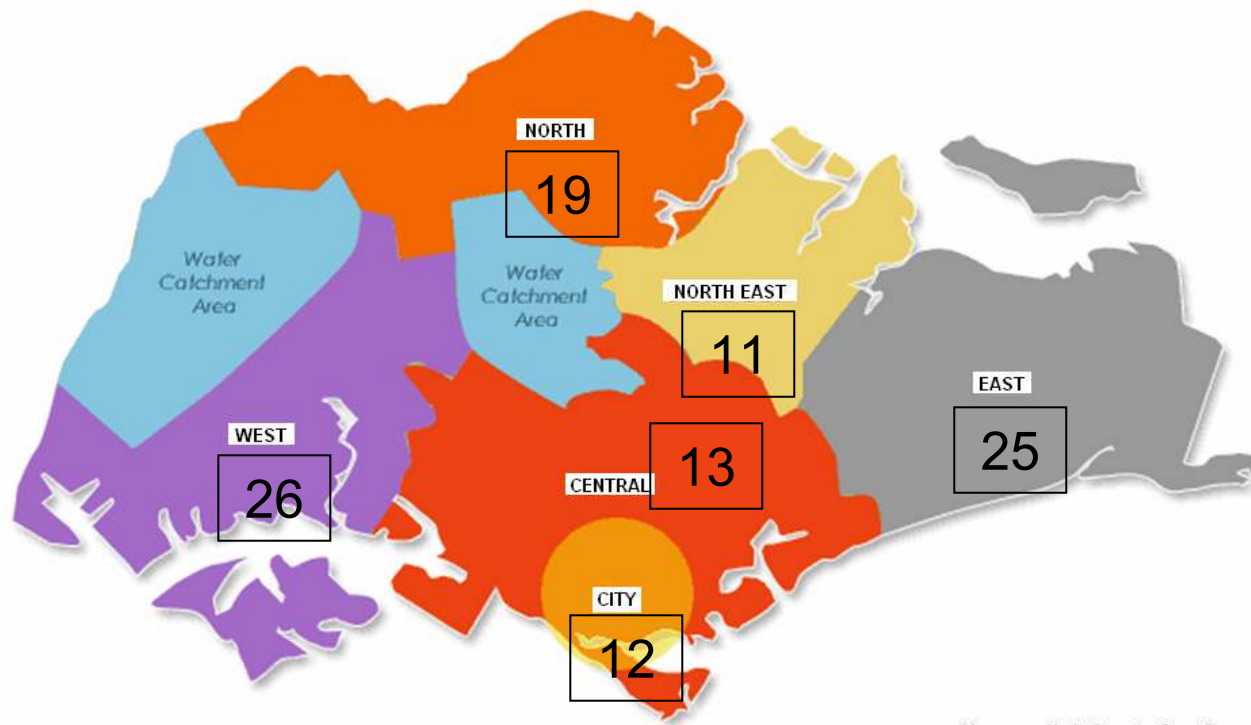


# Recruiting Family Physicians

- Two recruitment sessions were held in Sept 2006 for FPs interested in the Shared Care programme
  - Background of information on CKD and possible complications
  - Interactive discussions on management of CKD and possible complications

# Piloting the Renal Shared Care Programme

- 108 FP clinics (63 solo, 45 from 3 group practices) as of Nov 2006
- Distributed evenly over Singapore



Map source: Health Promotion Board Singapore

# Patient Recruitment

		<b>Total</b>
A	Potential patients identified	439
B	Patients referred by clinicians	48
	~ Referral rate (B/A%)	11%
C	Patients recruited #	34
	~ Recruitment rate (C/B%)	71%

# One patient subsequently withdrew from program stating preference for SGH doctors

- Recruitment rate of almost 1 patient per day (0.85) between 3 Nov and 31 Dec 2006
- 63 patients have been recruited so far

## Recruited Patient Profile

- Age: 54% in the 40 to 49 years range
- Gender: 64% Male
- Race: 88% Chinese
- Geographical distribution:

Region	
East (e.g. Bedok, Pasir Ris, Tampines)	45%
West (e.g. Jurong West, CCK)	24%
North (e.g. Woodlands, Yishun)	18%
Northeast (e.g. Hougang, Serangoon)	12%

- Mostly in the heartlands region of Singapore

## Real benefits to patients in terms of shorter distance traveled

	Same postal code	23	77%
	Different postal code, but either 1-2 mrt station away or within same housing estate	6	20%
	Different postal code	1	3%

- 77% of patients now have treatment for their CKD 1&2 at clinics within the same postal code as their home
- A further 20% travel within the same housing estate or for a distance of 1-2 MRT stations

## Real benefits to patients in terms of shorter distance traveled

- E.g. Mr V T
  - Previously:
    - Walk: Short walk to LRT station (5mins)
    - LRT: 4 stops to MRT station (6mins)
    - MRT: 11 stops to Outram Park station (34mins)
    - Walk: Walk into SGH (15mins)
  - Traveling time of 54mins (ex waiting time) and costing \$2.60
  - Now: Walking distance to clinic is only 250m
  
- E.g. Ms CHK
  - Previously:
    - Walk: Short walk to bus stop (5mins)
    - Bus: To MRT station (7mins)
    - MRT: 14 stops to Outram Park station (31mins)
    - Walk: Walk into SGH (15mins)
  - Traveling time of 58mins (ex waiting time) and costing \$2.60
  - Now: Walking distance to clinic is only 150m

Sources: Streetdirectory.com, SMRT, SBSTransit websites



## Difficulties encountered in programme roll-out

- Patients' refusal to participate in Shared Care
- Low patient referral for recruitment
- Problems in delivery of care

## Reasons for patient's refusal to participate in program

	Reasons	Total	
1	Reimbursement of medical benefit by employer did not include GP visit	6	43%
2	Patient preference for right siting to polyclinic	2	14%
3	Patient was referred by SAF	2	14%
4	Patient preference for SGH specialists	1	7%
5	Others (e.g. private patient wrongly referred)	3	21%
		<b>14</b>	

- Employment benefits do not cover FP clinic visits
- Lack of confidence with the care of FPs
- Cost of blood tests and other investigations at the FP clinic
- Worried that FPs may order other unnecessary tests
- FP clinics do not store the medication that they are consuming even though SGH has courier pharmacy service

# Reasons for low patient referral for recruitment

		Total
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# One patient subsequently withdrew from program stating preference for SGH doctors

- Initial low Renal physician awareness
  - Improvement seen after nursing clinician assisted in flagging out the suitable patients prior to consultation
- Low attendance in Renal clinic during review period
  - School holidays
- Programme only targeting subsidized patients

## Problems with delivery of care

- Long lapse from the time appointment is made by programme executive and patient physically seeking attendance with the FP
  - Clinic assistants or locum doctors are not adequately briefed of the programme and its workflow
  - Patient unable to obtain a refill of medications during review
- Patients are not updated on investigation results
  - Investigations performed on the same day as consultation
  - Results not reflected back
- Higher consultation charges by some participating FPs

## Moving Forward

- Having the right processes in place for shared care of patients with CKD 1 and 2, many of whom have other comorbidities like diabetes mellitus, enables these patients to be managed according to standards proposed for the national diabetes chronic disease management programme
- This would also provide these patients an avenue to utilise their Medisave for payment, by way of package payment, for the follow-up with FPs and monitoring of clinical quality indicators for their chronic diseases

# Moving Forward

- Identifying the right processes required for a successful Shared Care Programme would bring us a step closer to initiating other Shared Care Programmes with FPs e.g. for patients with early heart failure
  - Ease the burden of heavy patient load in specialists' clinics
  - Allow patients who can be managed adequately at the primary care, the convenience of receiving holistic care at a FP clinic of their convenience
  - Frees up scarce tertiary resources for the better management of more complex medical conditions
  - Patients continue to receive subsidized health care



**THANK YOU**