Primary Healthcare Blueprint Symposium

The Family Doctor and Chronic Disease Management

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Fit for Purpose

- **Family doctor led primary care**
- **Integrated multidisciplinary chronic disease management**
- **Enablement of family doctors in chronic disease management**

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Family Doctor Led Primary Care

A higher supply of FD, but not other PC doctors, are associated with

- most cost-effective services[1]
- more equity of care[2]
- lower mortality rates[2,3]
- higher early cancer detection rates[4,5]

1. *Franks P, Fiscella K. J Fam Pract 1998; 47:105-9*
2. *Shi L, Macinko J, Starfield B et al. J Am B Fam Pract 2003; 16:412-22.*
3. *Gulliford, M.C., J Pub Health Med 2002; 24:252-4*
4. *Campbell RJ, et al. Fam Med 2003; 35:60-4*
5. *Ferrante JM, et al. Am B Fam Pract 2000; 13:408-14*

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Having a Family Doctor in Hong Kong

- **Reported by 44% in 2014/15[1] (37% in 2009[2]) of persons aged ≥15**
- **Better outcomes of consultations[2]**
  - ↑ patient enablement score (3.3 vs 2.6)
  - ↑ **p**erson-centered care with concerns addressed 2x
  - ↑ Preventive care 1.2x, screening BP 2.6x & cervical cancer 1.7x
- **More effective gate-keeping[3]**
  - ↓ odds of A&E visits by 52%
  - ↓ odds of hospital admissions by 54%

1. *DH, Report on Population Health Survey (PHS) 2020-22 (Part 1). 28 December, 2022*
2. *Lam C.L. K., et al. Front. Med. 2014;* doi: 10.3389/fmed.2014.00029.
3. *Fung CSC., Lam CLK et al. BMC Health Services Research 2015.*

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Who is a Family Doctor?

- **"A doctor whom a person would first consult & for all types of health problems"[1,2]**
- **Comprehensive & continuous care**
  - Asymptomatic → Prevention & screening
  - Symptomatic → Accurate diagnosis
  - Diagnosis → Appropriate effective management
  - Illness progression → Monitor control, prevent complications & review management
  - Multi-morbidity → Co-ordinate & facilitate care
  - Complications → Rehabilitation, support & care

1. *Lam C.L. K., et al. Front. Med. 2014;* doi: 10.3389/fmed.2014.00029.
2. *DH, Report on Population Health Survey (PHS) 2014/15.*

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Integrated Chronic Disease Management

To prevent Cx & preserve QoL

- **Optimal disease & risk factors management (e.g. A to E in DM)**
- **A to E for the person living with a chronic disease (for decades)**
  - Adaptation & coping
  - Behavioural changes
  - Co-morbidities management
  - Daily living & quality of life
  - Enablement & empowerment

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Multi-disciplinary risk assessment

Risk stratification

Multi-disciplinary management

Risk Assessment & Management Programmes (RAMP)

- **Regular doctor consultation**
- **Structured comprehensive risk assessment & Cx screening**
- **Risk stratified personalized management with counselling on self-care & medical interventions**
- **Optimal disease & risk factor control**
- **Prevention of complications & deaths**
- **Enablement of daily functioning & QoL**

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RAMP + Usual Doctor Care ↓ Cx by 38-43% & Deaths by 46-55%

	RAMP-DM+ Vs. Usual Care only) in 10 years[1]			RAMP-HT + Vs Usual Care only in 5 years[2]		
Observed Events	**ARR**	**NNT**	**HR†**	**ARR**	**NNT**	**HR†**
Any complications	↓ 12.1%	8	0.57*	↓ 6.2%*	16*	0.62*
CVD	↓ 11.6%	9	0.52*	↓ 5.8%*	17	0.62*
CHD	↓ 6.8%	15	0.49*	↓ 2.0%*	47	0.66*
Heart Failure	↓ 4.4%	23	0.48*	↓ 2.1%*	52	0.54*
Stroke	↓ 5.1%	19	0.58*	↓ 3.0%*	35	0.63*
ESRD	↓ 3.2%	32	0.52*	↓ 0.7%*	155	0.62*
STDR	↓ 1.0%	102	0.50*	N.A.	N.A.	N.A
All-cause mortality	↓ 16.2%	6	0.45*	↓ 6.0%*	20	0.54*

ARR: Absolute risk reduction; NNT: Number Needed to Treat;
18373 *RAMP-DM and* 18373 *usual care DM subjects;* 79,161 *RAMP-HT and* 79,161 *usual care HT subjects were matched by propensity score.*
† *HR Hazard ratio by Cox regression adjusted for sociodemographic & clinical characteristics;*
* *Significant differences between RAMP + & usual care groups p<0.05*

1. Tang EHM et al. Ten-year effectiveness of the multidisciplinary RAMP-DM. Diabetes Care 2022;45:2871–82
2. Yu EYT et al. In-depth study of the cost-effectiveness of RAMP-HT. Final Report (HMRF 3142471) 2019

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RAMP + Usual Doctor Care ↓ Hospitalization by 39-51%, AED visits by 30-34% & SOPC attendance by 15-29%

Utilization rate/100 person years	RAMP-DM+ Vs. Usual Care only in 10 years		RAMP-HT + Vs Usual Care only in 5 years	
	ARR	IRR†	ARR	IRR†
Hospitalization§	↓ 23.78	0.49*	↓ 12.60	0.61*
A&E	↓ 22.00	0.64*	↓ 13.64	0.70*
SOPC	↓ 93.61	0.71*	↓ 23.55	0.85*
GOPC	↑ 73.29	1.16*	↑ 0.31	1.05*

ARR: Absolute rate reduction; IRR: Incidence rate ratio;
18,373 *RAMP-DM subjects and* 18,373 *usual care DM subjects; and* 79,161 *RAMP-HT subjects and* 79,161 *usual care HT subjects were matched by propensity score.*
† Incidence rate ratio was adjusted by sociodemographic, clinical characteristics and the corresponding number of service utilizations at baseline.
* Difference between RAMP+ and usual care group was significant at $p<0.05$ by multivariable negative binomial regression

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RAMP + Usual Doctor Care is Cost-saving

Cost (HKD)	Cost per DM subject in 10 years			Cost per HT subject in 5 years		
Public medical service	RAMP-DM+ (N=18,373)	Usual care only (N=18,373)	Difference	RAMP-HT+ (N=79,161)	Usual care only (N=79,161)	Difference
RAMP	$2,568	NA	$2,568	$521	NA	$521
Usual medical service	$180,182	$264,986	-$84,804	$61,094	$91,561	-$30,467
Total costs	$182,751	$264,986	-$82,236	$61,615	$91,561	-$29,946

*Projecting to **22,968** uncomplicated DM patients enrolled to RAMP-DM in HA primary care from Aug 2009 to Sept 2010, RAMP-DM could potentially save **HKD1,888,796,400** in 10 y.*
*"Projecting to **56,160** uncomplicated HT patients managed by RAMP-HT in HA primary care from October 2011 to September 2012, RAMP-HT could potentially save **HKD1,681,767,300** in 5 y.*

天時、地利、人和

- **RAMP integrated with usual doctor care saves lives & medical cost**
- **RAMP should be normalized for all people with DM or HT.**
- **The family doctor is in the best position to deliver integrated chronic disease management**
  - to the right person
  - at the right time
  - in the right place

Views of People with Chronic Diseases on the Family Doctor Led Model

- People were familiar with the FD concept.
- Doctor's honesty, integrity & effectiveness were more important than qualification to serve as a FD.
- People with a FD thought the FD-led model was appropriate for chronic disease care.
- People without a FD thought it a 'luxury' & hard to find a FD.
- Public system was preferred for chronic disease care whether they had a FD or not.
- Cost, consistency, continuity and access to allied service & Ix were barriers to the use of FD for chronic disease Mx.

Mercer et al. A qualitative study of the views of patients with long-term conditions on family doctors in Hong Kong. BMC Family Practice 2010, 11:46.

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Enablement of the Family Doctor in Chronic Disease Management

- **Change the mind-set & policy that having a personal FD is a need instead of an option.**
- **Enable every citizen to find a personal FD with a credentialing system of training & quality assurance (the PC Registry).**
- **Make investigations, medications & multidisciplinary PC services available, accessible & affordable in private FD practice.**

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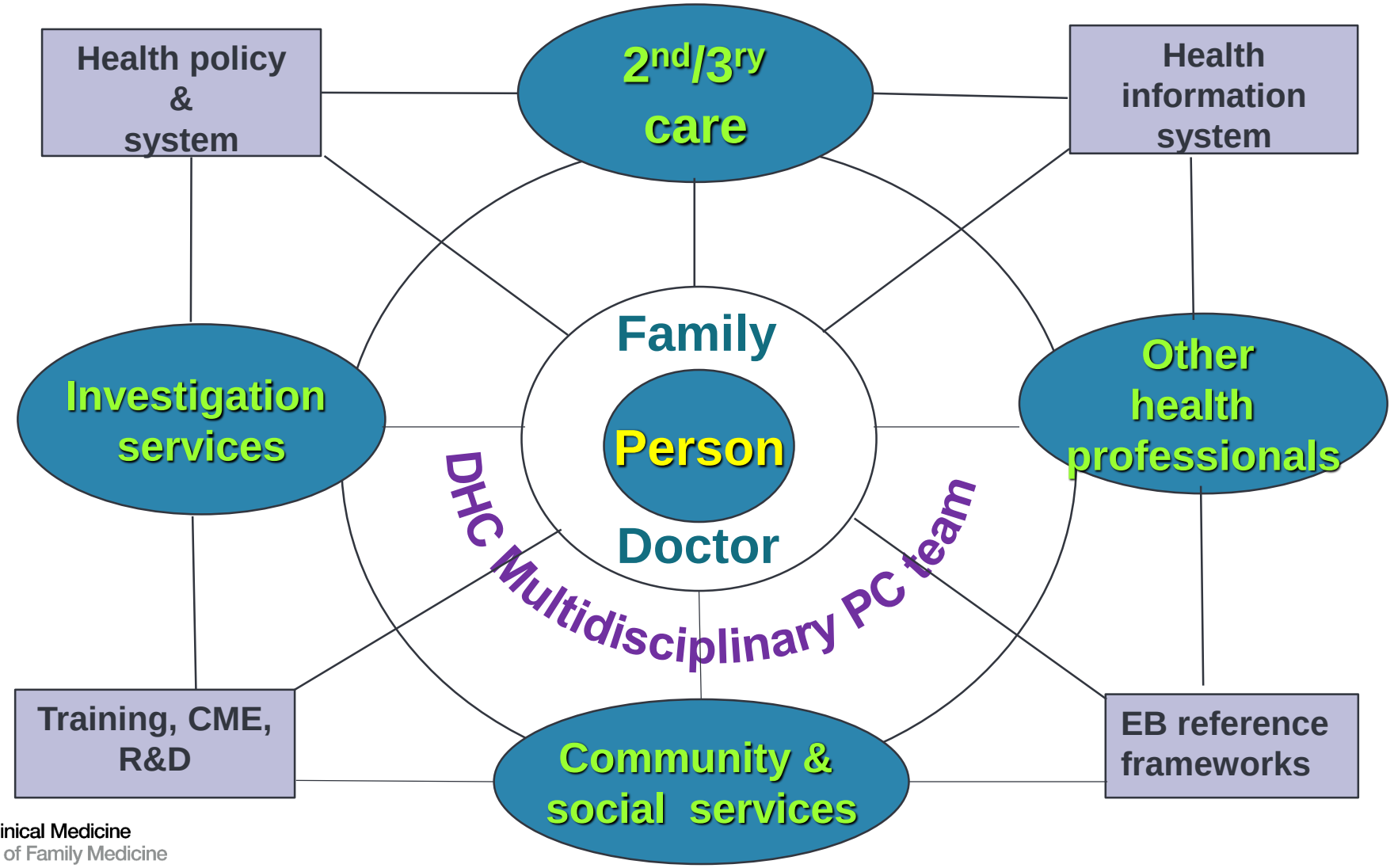
Exercise training
Nurse counselling
SCC
Mental healthcare
Weight control
PEP
Dietician
Investigations
& Medications
Optometrist

Integrated Chronic Disease Management in Primary Care



Building Dreams,

Realizing Health for All !

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