The 10th AHKDN Anniversary Cum Evidence-Based Practice Symposium 2018

Recommendation on Preconception Care for Women with Diabetes

20 Oct 2018



Members



Back row from left to right

- Ms. Kam Ping KWOK (PMH)
- Ms. Yin WONG (GOPC, KCC),
- Ms. Yuen Hung LAM (PYNEH),
- Mr. Sum Ming LEUNG (OLMH),
- Ms. Wai Kuen KOO (QEH)

Front row from left to right

- Ms. Theresa YEUNG (PWH)
- Ms. Kit Man LOO (PWH)
- Ms. Samsonly CHAN (UCH)

Background

- pre-gestational Type 1 or Type 2 diabetes have poorer maternal and fetal outcomes than women without diabetes
- **pre-conception care (PCC)** resulted with fewer major congenital malformations significantly, having fewer problems and receiving shorter period staying in special care.

SIGN, 2017

What is Preconception care ?

- is the provision of structured preventive care and services (such as **screening, counseling**, **optimizing glycaemic control** and management of **modifiable risk factors)** for women with diabetes prior to conception
- to improve pregnancy outcomes for both fetus and women with diabetes

Preconception Care Services in the Local Settings

Survey for Preconception Care

- Anonymous questionnaires were distributed to nurse participants (Diabetes Centres, RAMP GOPCs) in AHKDN AGM on 17 Jun 2017

- 2 sets of questionnaires

- DM Centre/ RAMP-GOPs in-charges: PCC management survey
- All Nursing Staff : General PCC survey

Dear colleagues,

We are a group of diabetes nurses currently engaged in an AHKDN Evidence Based Practice (EBP) project. Our project title is "Developing a structured educational guideline for preconception care (PCC) for women with diabetes". We would like to gain an understanding on the current practices of PCC & related perinatal care in your hospital / clinic. We appreciate your support in completing this anonymous questionnaire. All submitted information is for internal use only. Thanks!

Samsonly Chan (UCH), Koo Wai Kuen (QEH), Kwok Kam Ping (PMH), Lam Yuen Hung(PYNEH), Leung Sum Ming (OLMH), Loo Kit Man (PWH), Wong Yin (KCC), Theresa Yeung (PWH)

Please ✓ your workplace

☐Diabetes Centre ☐GOPC involved in RAMP program ☐Ohers please specify_____

Is there any Obstetric Clinic in your hospital?

☐ Yes ☐No

The following questions are applied to the <u>management of preconception care for women with diabetes.</u>

1. **Do you and your team refer the women to dietitians routinely before conception?**
   ☐ Yes ☐ No
2. **Do you and your team refer the women to do the following screenings routinely before conception?**
   ☐ Diabetes complication screening ☐ Retinal photos only ☐ Blood / urine tests
   ☐ Never ☐Others (Please specify)_____
3. **Does your medical team prescribe Folate to the women prior to conception?**
   ☐ Yes ☐ No
4. **Does your medical team continue prescribing Metformin for women prior to conception?**
   ☐ Yes ☐ No

Centre/ Unit in – charges: PCC management survey

Contains 4 items

Current Practice (In-charges)

N = 17 (DM Centre in-charge x 14 & RAMP GOPC x 3)

Preconception Care	Y		N	Remarks
Do you and your team refer the women to do CxSx and / retinal photo	16	94%	1	received more than 1 answer
Do you and your team refer the women to dietitians routinely before conception?	7	41%	10	
Does your medical team prescribe Folate to women prior to conception?	4	25%	12	UK x 1 Sometimes x1
Does your medical team continue prescribing Metformin for women prior to conception?	6	40%	9	Sometimes x2 UK x 1

Please ✓your workplace

☐ Diabetes Centre ☐ GOPC involved in RAMP program ☐ Others please specify_____

Have you ever been involved in preconception care (PCC)?

☐ Yes ☐ No

The following questions are related to <u>preconception care (PCC) for women with diabetes</u>

1. **Is there any standardized education content / protocol in your workplace for PCC?**
   ☐ Yes ☐ No
2. **How often do you provide PCC / contraceptive advice in a DM educational session for <u>women within the child bearing age</u>?**
   ☐ At least once throughout the educational program ☐Upon patients' enquiry ☐ Sometimes ☐ Seldom ☐ ☐Never
3. **Do you distribute 避孕及生育計劃 PCC pamphlet (published by SAG) to patients when providing PCC?**
   ☐ Always ☐ Sometimes ☐ Seldom ☐ Rarely ☐ Never
4. **Is/ are there any barrier(s) you have encountered in provision of PCC? (can ✓more than 1 choice)**
   ☐ My patients do not discuss pregnancy planning with me
   ☐ I do not have time to provide preconception care
   ☐ I do not have the knowledge and skills to provide preconception care
   ☐ There is no barrier in providing preconception care
   ☐ Others (please specify)_____
5. **Which of the following topic(s) will you cover in the PCC for women with diabetes? (can ✓more than 1 choice)**

☐ Targets of control (such as ABC) ☐ Possible adverse fetal pregnancy outcomes ☐ Weight management if indicated
☐ Contraceptive methods ☐ Possible adverse maternal pregnancy outcomes ☐ Heredity risk of diabetes to offspring
☐Smoking cessation if indicated ☐ Medications contraindicated in the pregnancy ☐ Drugs contraindicated in pregnancy
☐Frequency of SMBG & BG targets ☐ Others (please specify)_____

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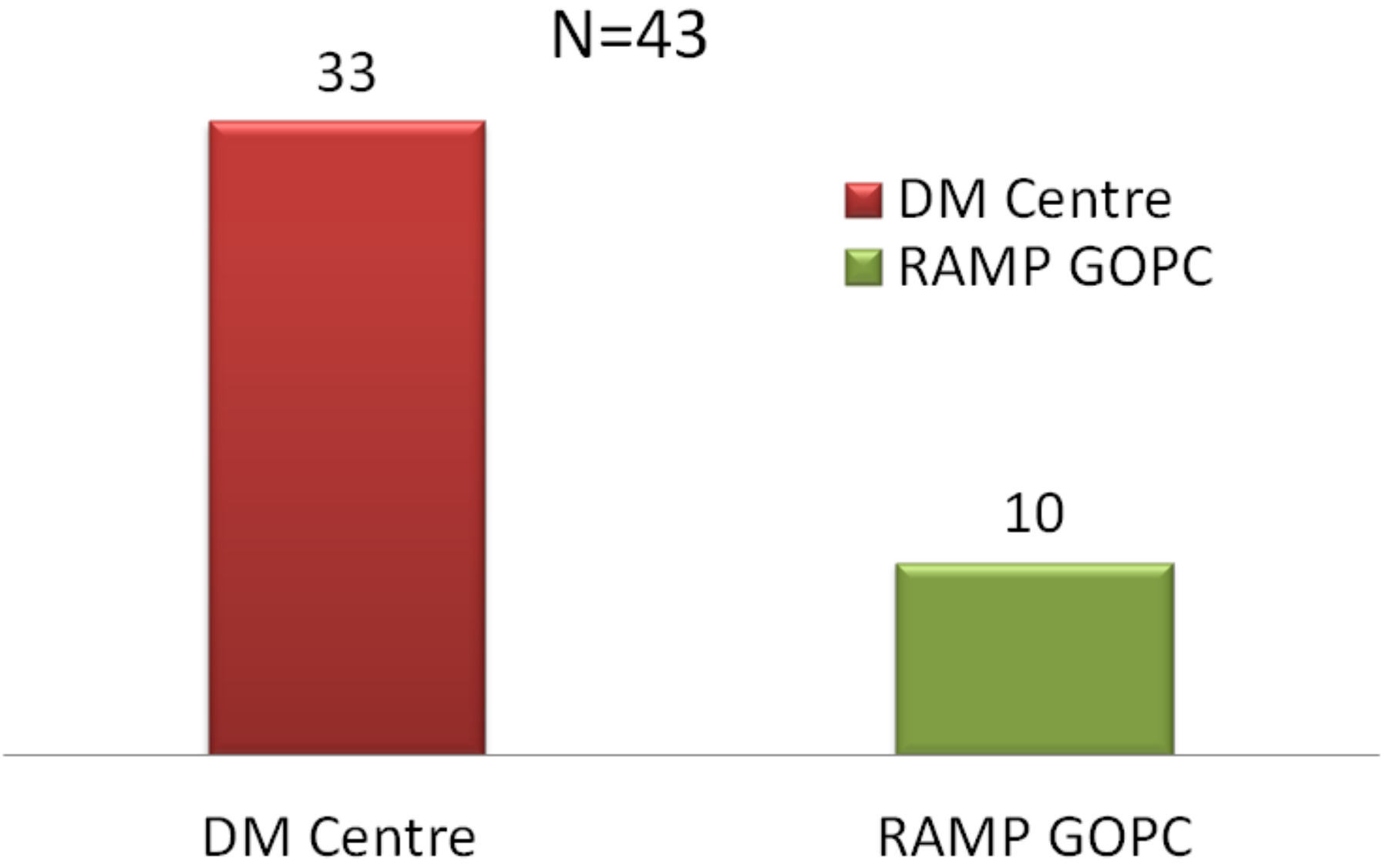
6. **In general, what are the blood glucose target ranges for pregnant women with Type 2 diabetes on diet control only?**
   Fasting: ___ to ____ (mmol/L) 2hr- post meal:____ to ____ (mmol/L)
7. **What are the recommendations of SMBG for pre-conceived women with Type 2 DM on diet control only? Please✓**
   Fasting____ 2-hr-post-B'fast_____ Pre-lunch_____ 2-hr post-lunch_____ Pre-dinner____ 2-hr Post-dinner____
   Other time (please specify):_____
8. **Do you advise pregnant women with T2 DM (on diet control) to test morning urine ketone?** ☐ Yes ☐ No
9. **Do you advise pregnant women with T2 DM (on insulin treatment) to test morning urine ketone?** ☐ Yes ☐ No

All Nursing Staff - general PCC survey

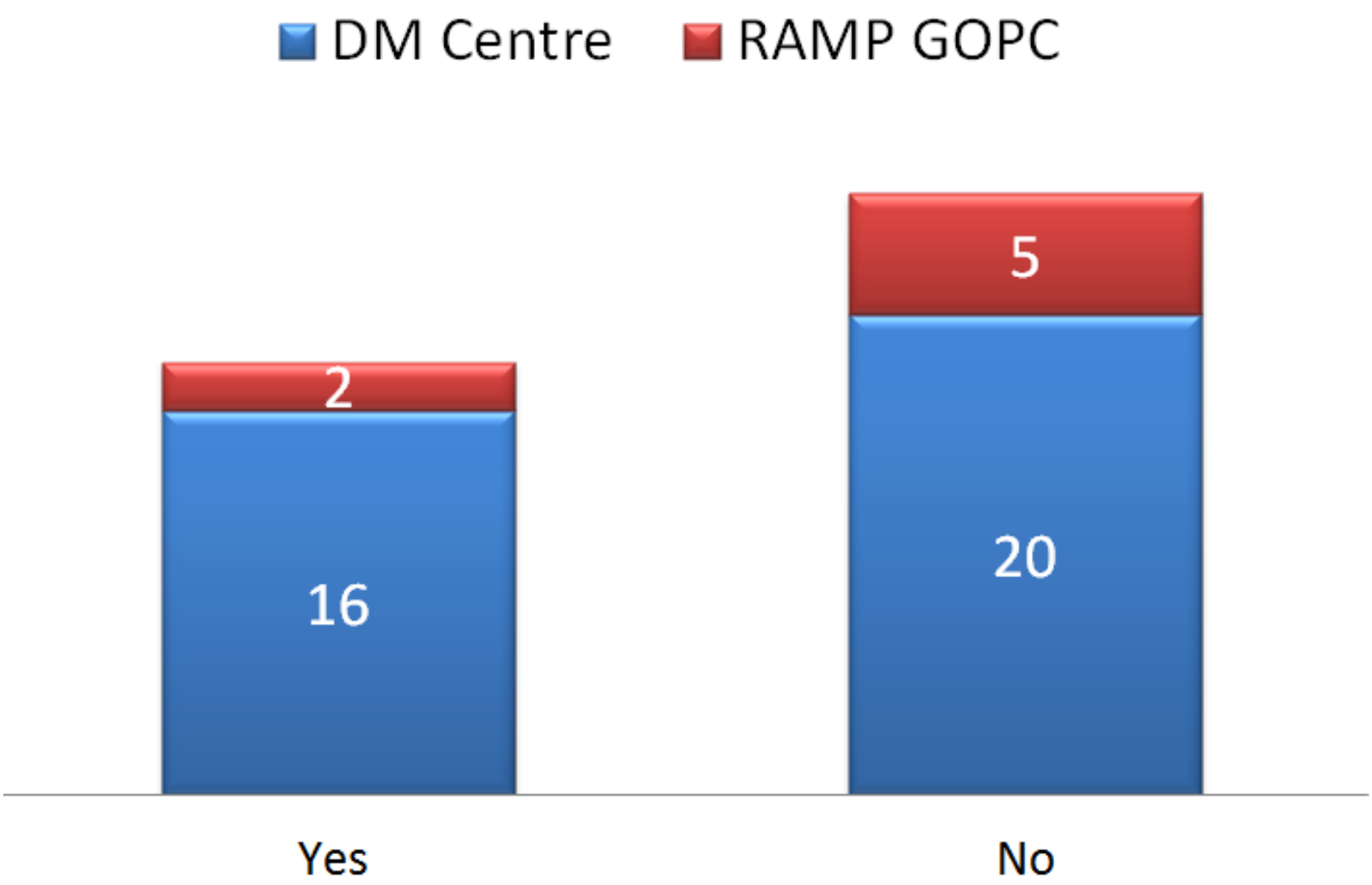
Contains 9 items

Result Highlights

Questionaires Received

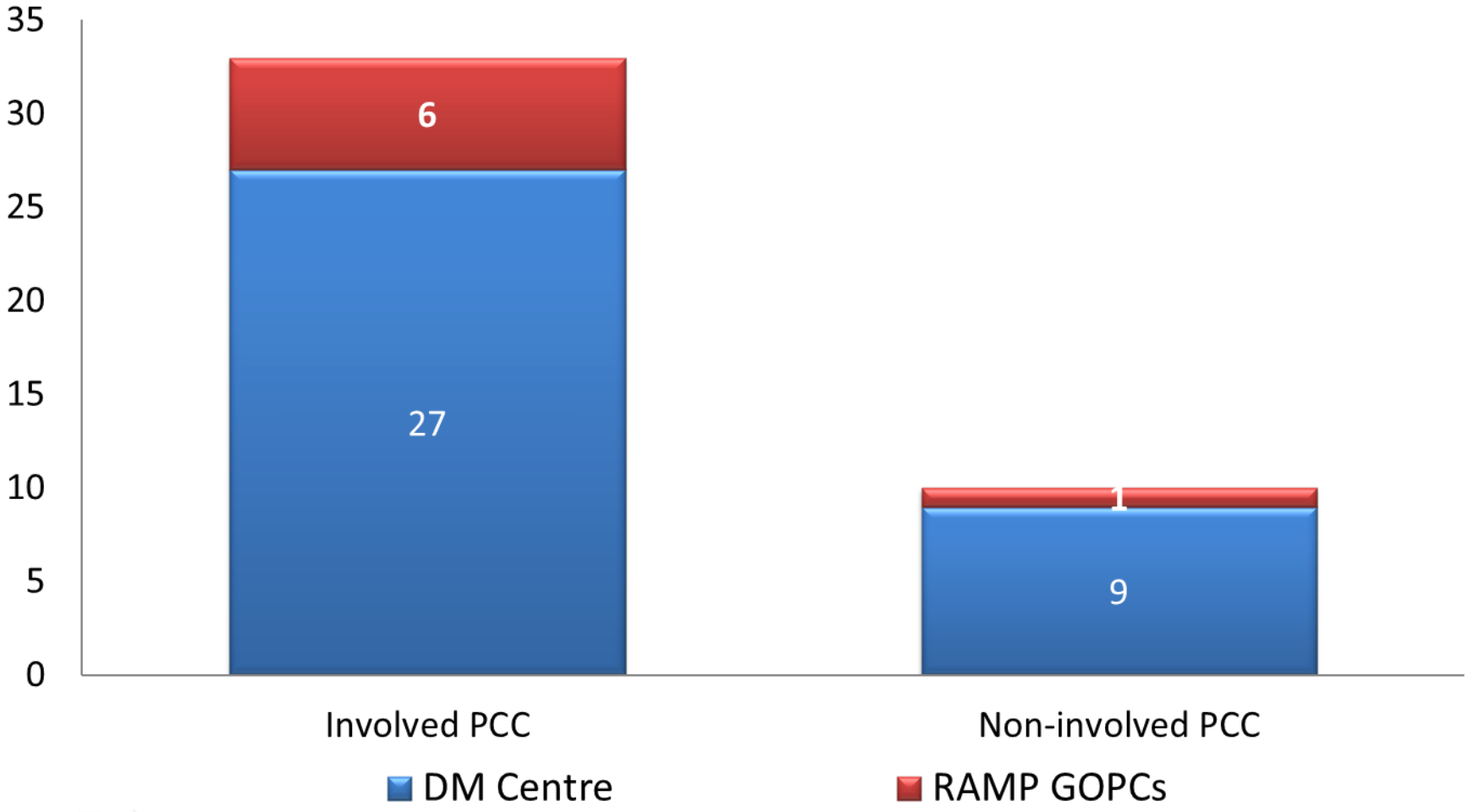


Is there any standardized education content in your workplace for PCC?

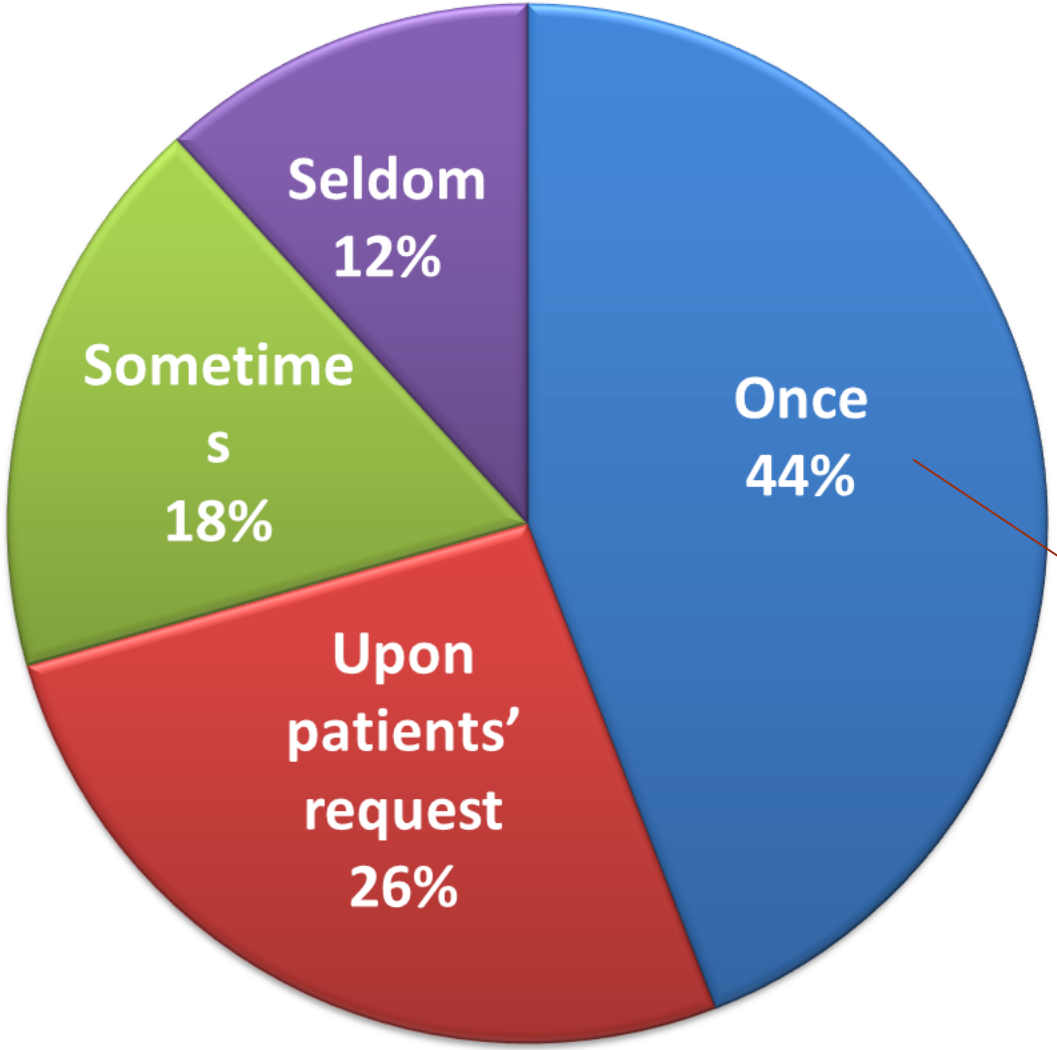


Nurses involved in PCC

N= 33 (DM Centre x 27, RAMP GOPC x 6)



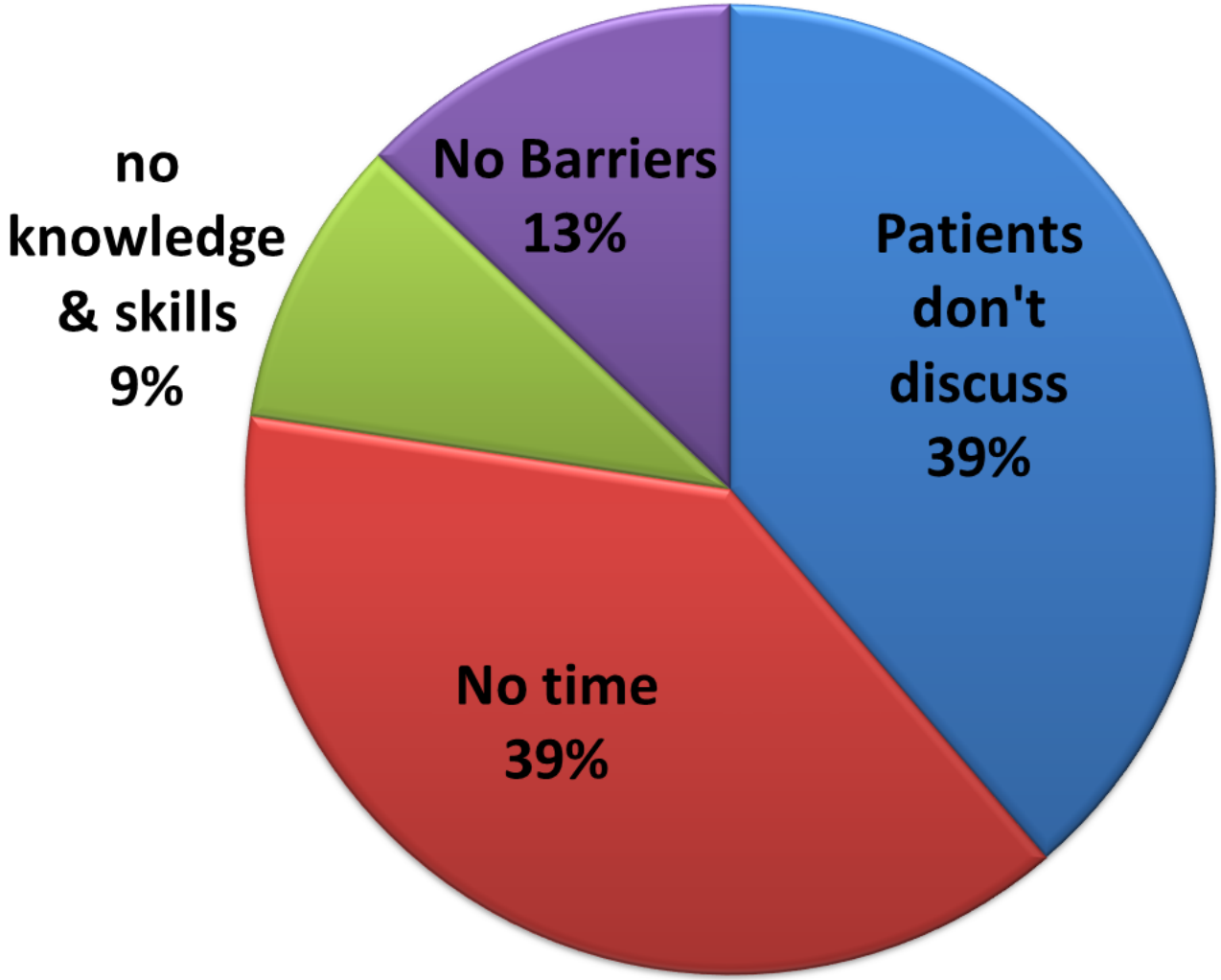
For those involved in PCC,
how often do you provide preconception care in DM educational session?



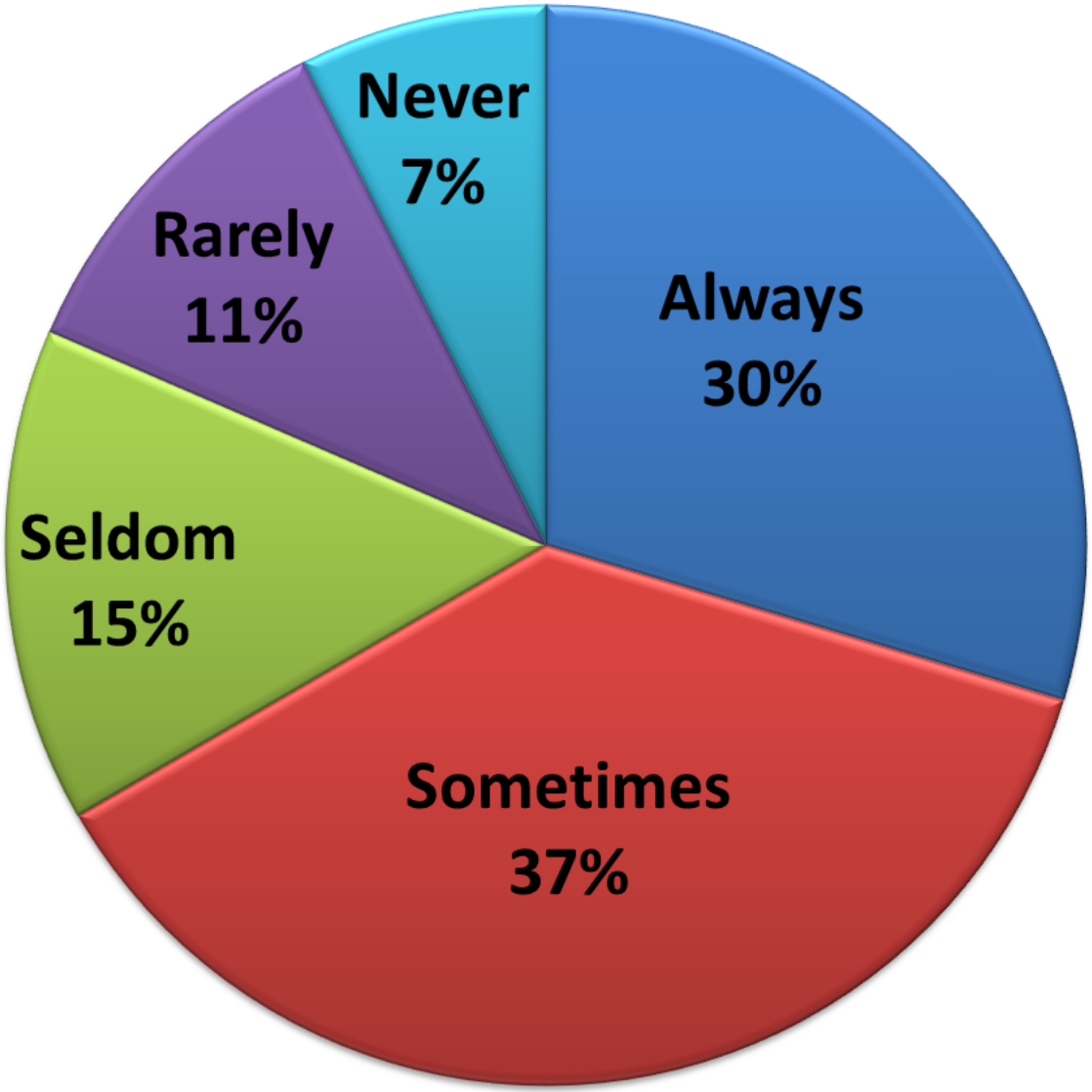
Involved in PCC N= 33

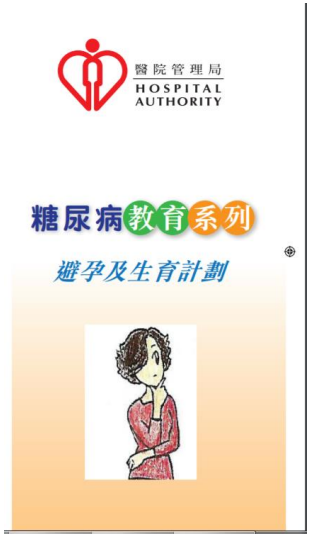
At least once throughout the educational programme

Is/ are there any barrier(s) in provision of preconception care?



How often do you distribute the HA SAG PCC pamphlet to patients?





Is there any PCC management guideline in the local settings?

5.1.2 Blood glucose lowering therapy and monitoring for type 2 diabetes

1. All people with diabetes should be encouraged to perform self-monitoring of blood glucose (SMBG). SMBG should be carried out three or more times daily for people with diabetes using multiple insulin injections and pregnant women on insulin therapy[11, 19].

For women with type 2 diabetes who are planning pregnancy or have become pregnant, the HbA1c target should be optimized < 6.5%-7%, if this can be achieved without excessive hypoglycaemia[11]

5.1.4.2 Diabetic Retinopathy

Women with pre-existing diabetes who are planning pregnancy or who are pregnant should be counselled on the risk of development and/or progression of diabetic retinopathy. Eye examinations should occur before pregnancy or in the first trimester in patients with pre-existing diabetes, and then patients should be monitored closely as indicated by the degree of retinopathy.

5.3 Diabetes in pregnancy

All female with diabetes of reproductive age group should receive counseling which should include:

- risk of pregnancy in diabetics
- the importance of optimal diabetic control before conception
- use of medications before conception, e.g. oral hypoglycaemic agents, antihypertensive agents and lipid-lowering agents
- potential risk to mother and fetus, if there is any complication, such as retinopathy or nephropathy.

Author: Quality Assurance Sub-committee of Central Committee on Diabetic Service

Our Project

- To develop a recommendation on preconception care for women with diabetes that incorporate the best available evidence-based knowledge and practices;
- To update the content of patient education pamphlet 避孕及生育計劃 based on the findings



Literature Search(1)

"diabet*", "pregnancy in diabetics", "preconception", "pregnan*", "antenatal", "pregnan*outcome", "pregnan* complications", "bariatric", "obese", "human", and "English" via

PubMed, The Cochrane Library, Embase, Medline and Google Scholar.

randomized controlled trials (RCT), systematic reviews (SR) and meta-analysis published from January 2008 to June 2018

1634 potential relevant articles were retrieved

1612 articles were excluded by as irrelevant

22 studies were selected
(1 RCT study, 13 studies of systematic reviews and 8 studies of meta-analysis)

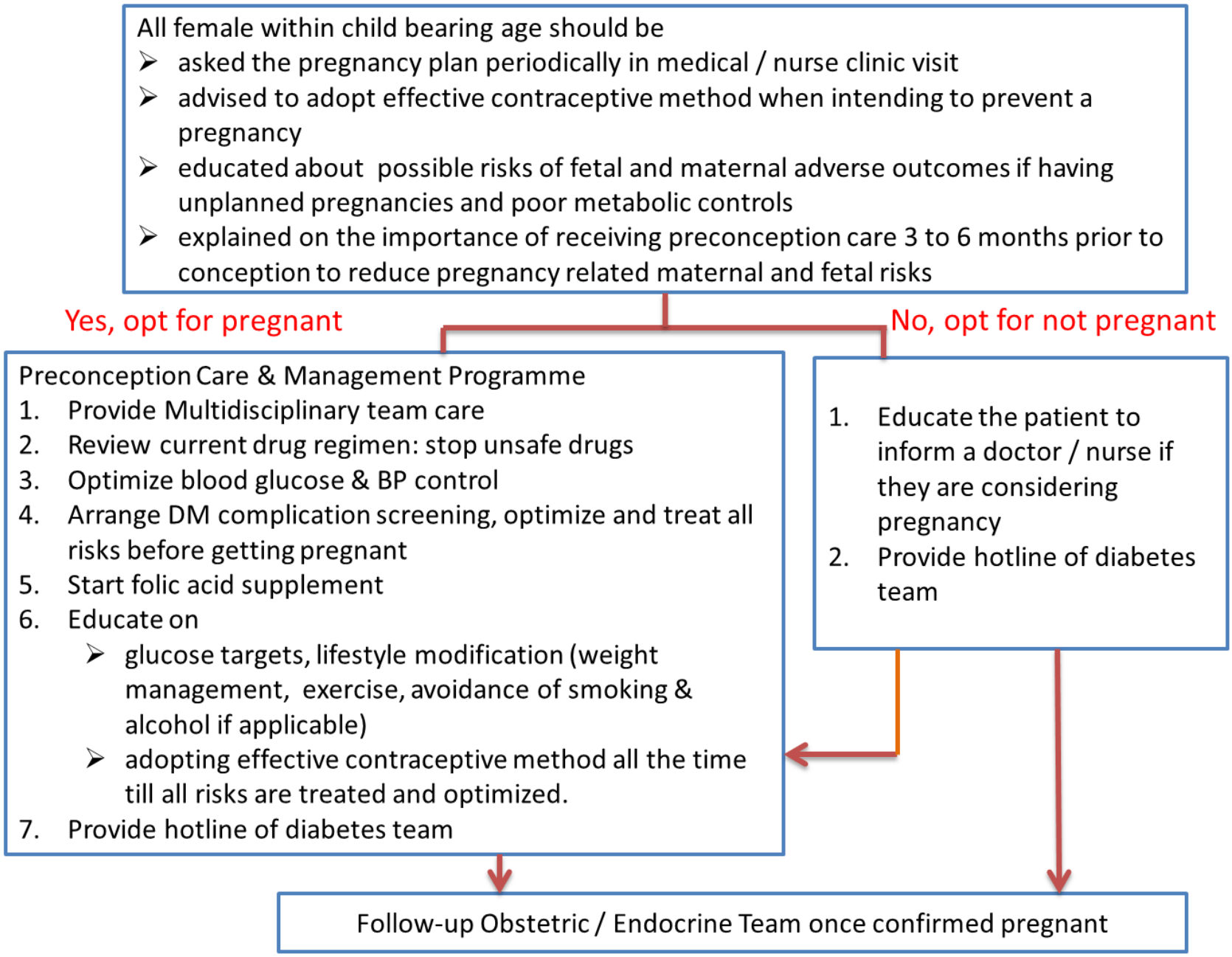
Literature Search (2)

"diabetes," "pregnancy," "preconception," and "guideline" via the Google searching engine.

1. American Diabetes Association. (2018).
2. National Institute for Health Care Excellence. (2015)
3. The Australasian Diabetes in Pregnancy Society consensus guidelines for the management of type 1 and type 2 diabetes in relation to pregnancy. (2005)
4. Scottish Intercollegiate Guidelines Network. (2017)

Four international diabetes management guidelines were selected

Proposed Flow Chart for Preconception Care for Women with Diabetes


All female within child bearing age should be
asked the pregnancy plan periodically in medical / nurse clinic visit
advised to adopt effective contraceptive method when intending to prevent a pregnancy
educated about possible risks of fetal and maternal adverse outcomes if having unplanned pregnancies and poor metabolic controls
explained on the importance of receiving preconception care 3 to 6 months prior to conception to reduce pregnancy related maternal and fetal risks
Yes, opt for pregnant
No, opt for not pregnant
Preconception Care & Management Programme
1. Provide Multidisciplinary team care
2. Review current drug regimen: stop unsafe drugs
3. Optimize blood glucose & BP control
4. Arrange DM complication screening, optimize and treat all risks before getting pregnant
5. Start folic acid supplement
6. Educate on
glucose targets, lifestyle modification (weight management, exercise, avoidance of smoking & alcohol if applicable)
adopting effective contraceptive method all the time till all risks are treated and optimized.
7. Provide hotline of diabetes team
1. Educate the patient to inform a doctor / nurse if they are considering pregnancy
2. Provide hotline of diabetes team
Follow-up Obstetric / Endocrine Team once confirmed pregnant

The Way Forward

- To submit the recommendation to the HA Central Committee Diabetes Services for comments and endorsement.
- To identify strategies to engage women under this care category to receive the structured preconception care and minimize unplanned pregnancies and related adverse pregnancy outcomes.
- To evaluate the outcomes of the structured preconception care by conducting a pilot project


Thank You