GP Spring Education & Networking Evening

9th May 2022

Welcome & Panel Introductions

Dr Richard Horgan, Consultant Obstetrician & Gynaecologist at CUMH, co-chair of CUMH/GP liaison committee

Ms. Majella Phelan, CMM2, Smoking Cessation

Ms. Alex Campbell, Registered Advanced Midwife Practitioner

Dr Fergus McCarthy, Consultant Obstetrician & Gynaecologist

Dr Mairead O' Riordan, Consultant Obstetrician & Gynaecologist

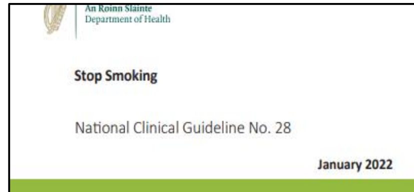
Smoke Free Start CUMH – Right Care, Right Place, Right Time

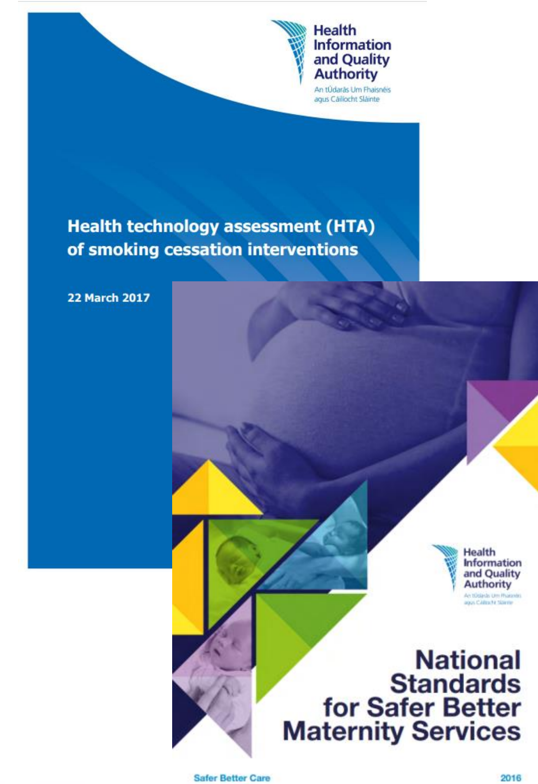
Majella Phelan, CMM2, Stop Smoking

Smoke Free Start

- Onsite, midwifery-led stop smoking service.
- Introduced opt-out stop smoking service in CUMH.
- Introduced Breath Carbon Monoxide (BCO) testing for all pregnant women.
- Provide intensive Standard Treatment Programme for smoking cessation.
- Introduce Making Every Contact Count programme to CUMH.

Smoking in Pregnancy Guidelines





Breath Carbon Monoxide Testing (BCO)

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- Valid, reliable test to detect CO in exhaled air
- Quick, safe, immediate result at POC
- Non-invasive
- BCO testing during antenatal care combined with 'opt out' referral to cessation services can increase attendance to support services by twofold <u>and</u> increases the probability of quitting by delivery by twofold (Campbell *et a*l, 2016 and Bell *et al*, 2018)

Smokerlyzer® MaternityCO Chart

COppm	%FCOHb
> 20	5.66
19	5.38
18	5.09
17	4.81
16	4.53
15	4.25
14	3.96
13	3.68
12	3.40
11	3.11
10	2.83
9	2.55
8	2.26
7	1.98
6	1.70
5	1.42
4	1.13
3	0.85
2	0.57
1	0.28
0	0.00

Reference:
1. COppm- %FCOHb calculation taken from: Gomez C. et al (2005)
"Expired air carbon monoxide concentration in mothers and their spouses above 5ppm is associated with decreased fetal growth."
Preventive Medicine 40pp 10-15.
Issue 4- November 2015, Part No: LAB469

BCO TESTING IN MATERNITY

- Prevents discrimination of the pregnant smoker
- Identifies smokers who do not disclose their smoking habit
- Identifies women exposed to second-hand smoke
- Identifies women exposed to CO through faulty equipment

OPT OUT REFERRAL

- Refer all women who currently smoke
- All women who have recently stopped smoking for relapse prevention
- Women who have a BCO higher than 4ppm
- Any pregnant women who need support to stay quit

Standard Treatment Programme

- Session 1 – Pre-quit assessment
- Session 2 – Quit Date as soon as possible
- Session 3 – 1 week post Quit Date
- Session 4 – 2 weeks post Quit Date
- Session 5 – 3 weeks post Quit Date
- Session 6 – 4 weeks post Quit Date

- There is also 12 week, 26 week and a 52 week post quit date follow up
- Provided face-to face, telephone, online or a blended service.

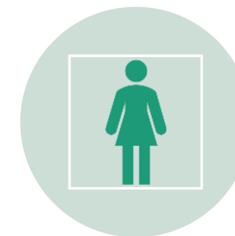
Women Referred to Smoke Free Start

TOTAL REFERRALS - 1608

SMOKE FREE BABIES – 472

MULTIPAROUS – 65%

PRIMIPAROUS - 27%

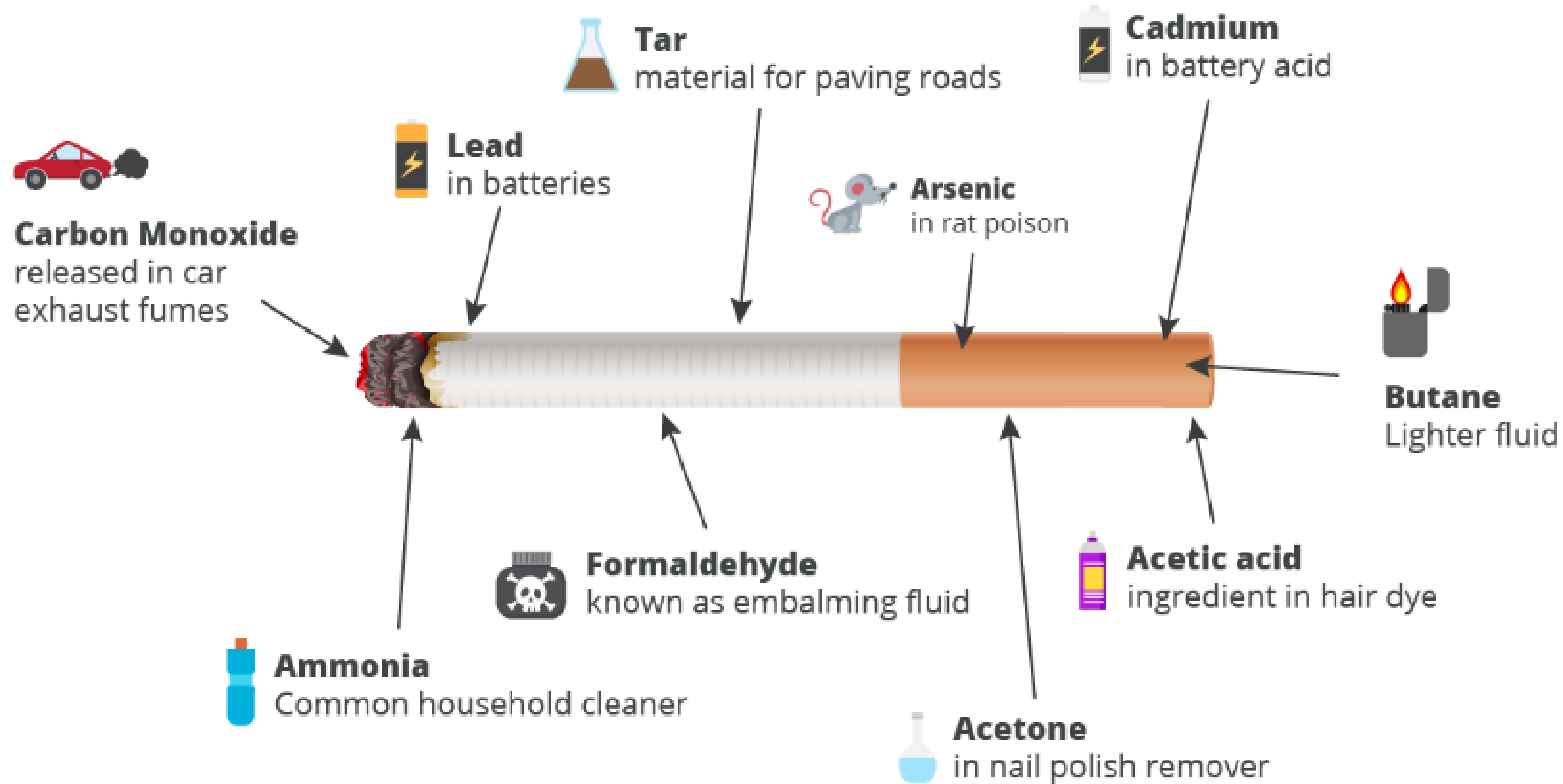


NULLIPAROUS - 8%

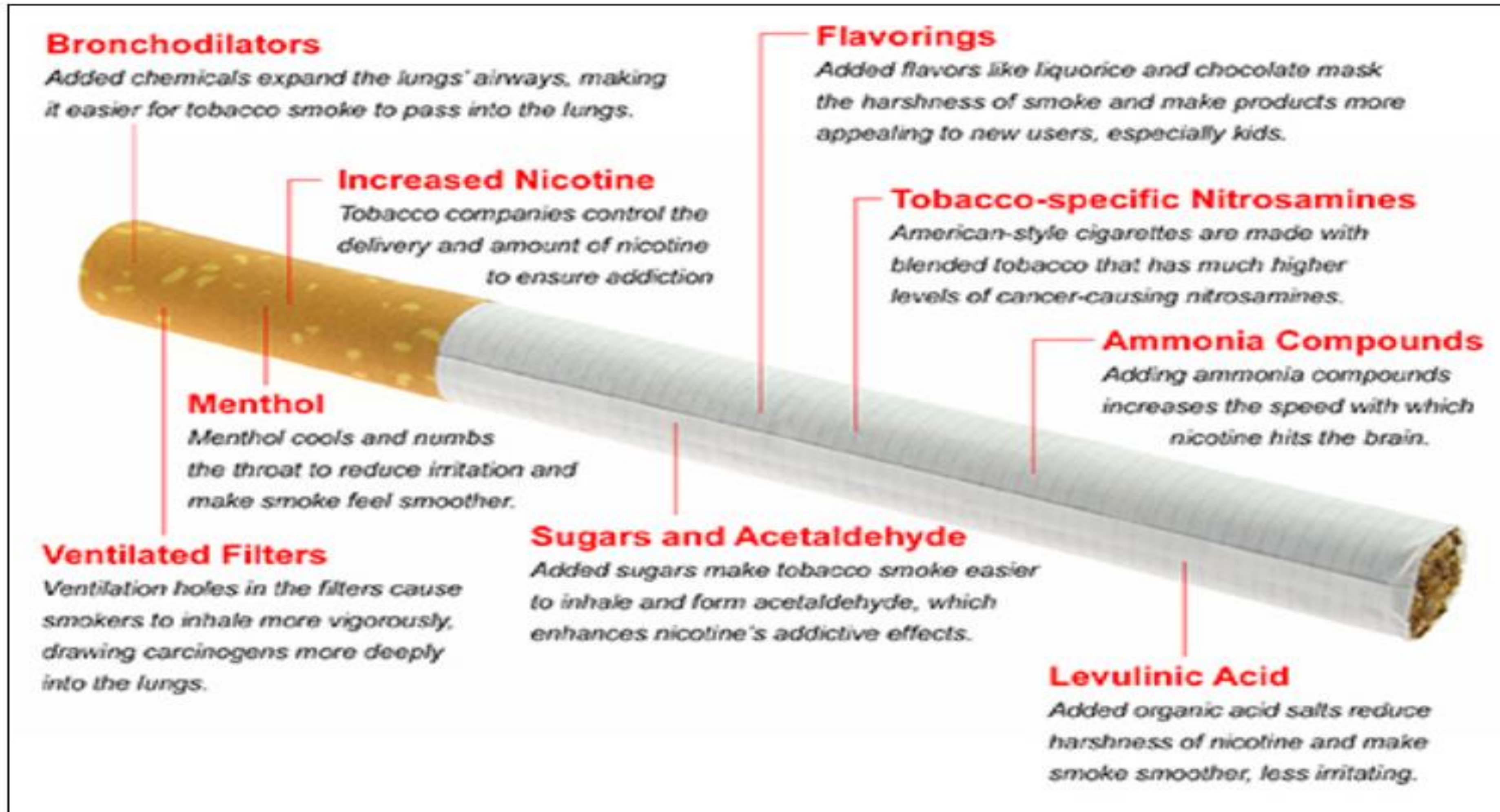
Smoking in Pregnancy in women attending CUMH

- Up to 16% of women at booking have smoked at some stage of the current pregnancy.
- Up to 33% of women at booking have a history of smoking.
- Attending specialist care – 45%
- Mental Health issues – 46%
- Linked with social workers – 14%
- Other addictions – 4.7%
- ER/Inpatient – 64%

Cigarette Smoke contains the following



Cigarettes are Engineered to be Addictive

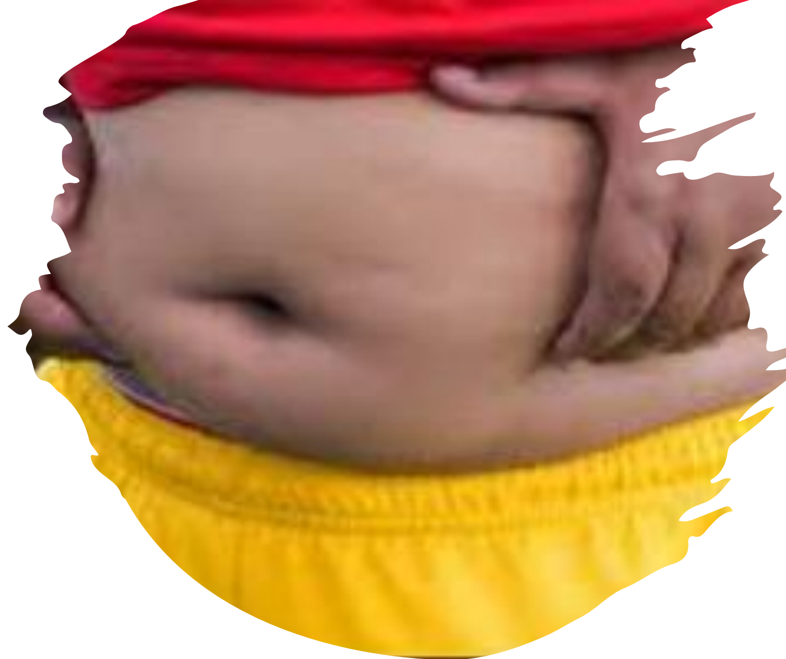


Consequences of smoking in pregnancy

- Subfertility
- Ectopic pregnancy (>1.7 times more likely)
- Miscarriage (24%-32% more likely)
- Preterm births (27 times more likely)
- Placental problems
  - Low-lying placenta (>1.5 times more likely)
  - Placental abruption
- IUGR
- Stillbirth doubles the likelihood
  - Highly associated with IUGR
- Neonatal death (>1.7 times more likely)
- Sudden Infant Death Syndrome (2-3 times more likely)

Reference: Action on Smoking and Health. The Smoking in Pregnancy Challenge Group: Review of the Challenge. July 2018)

Euro-Peristat Project. European Perinatal Health Report. Core Indicators of the health and care of pregnant women and babies in Europe 2015



LIFELONG IMPLICATIONS FOR THE CHILD

- Attention deficit disorders, hyperactivity
- Learning disabilities
- Transplacental carcinogenesis
- Hearth defects (50% more likely in smokers, increased risk in SHS)
- Childhood obesity, Diabetes
- Cleft lip

Women receiving care in CUMH who smoke

- Pregnancy loss experienced by 36% of referrals, of these 37% had recurrent pregnancy loss.
- IUGE/LBW/VLBW - 22%
- VLBW – 3.5%
- Birth weight < 3000g – 38%
- Normal weight babies -14% GDM
- Preterm births – 13%
- PPROM – 3.5%
- Placental problems – 5.4%
- PPH – 19.5%
- Fetal death in current pregnancy – 2.75%

National Clinical Guidelines – Stop Smoking, No. 28

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Prioritises pregnant women

Ask – and record smoking status

Is the client a smoker, ex-smoker or a non-smoker?

Are they exposed to second hand smoke in the car or home?

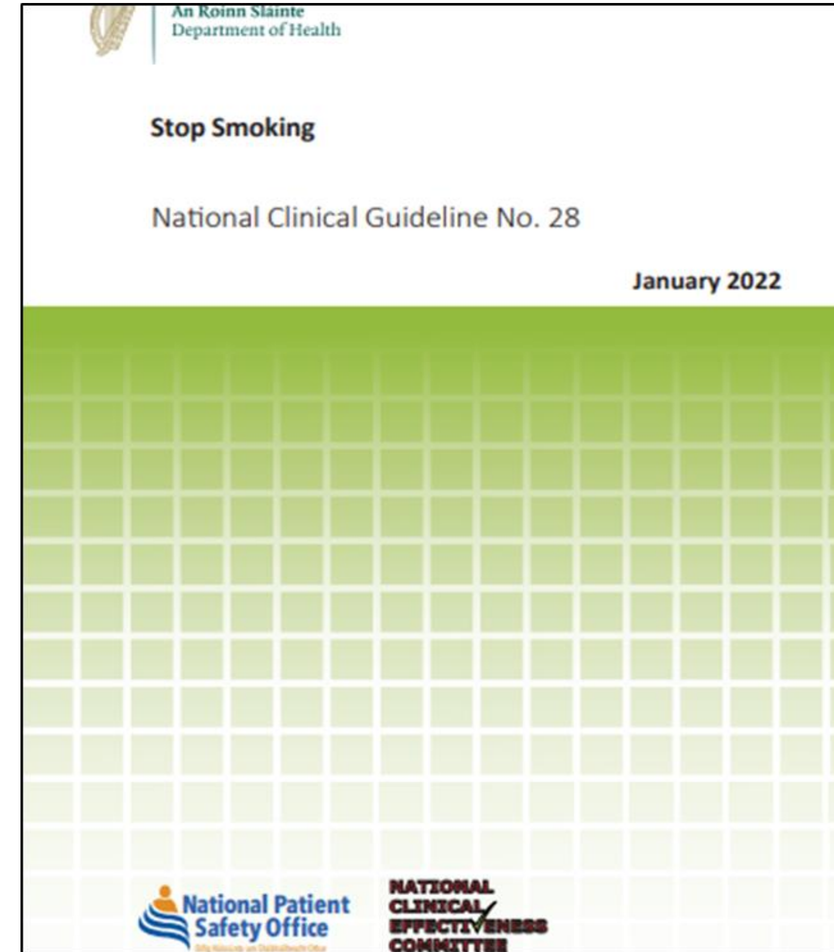
Advise – on the best way of quitting

The best way to stop smoking is with specialist support, unsupported attempts are less effective.

Act – on woman's response

Build confidence, give information, refer, prescribe.

Up to four times more likely to quit successfully with support.



Why specialist Maternity Stop Smoking Service

- Recommended by National Maternity Strategy, HIQA HTA, National Clinical Guideline No 28, Stop Smoking
- On site, can combine care with antenatal appointments
- Provided by a Midwife with specialist training in behavioural change for pregnant women who smoke.
- Service can liaise with other specialist services to give a multidisciplinary approach to antenatal care.
- Provides a safer care pathway for women attending maternity services

Referring to Smoke Free Start

- **Email** – Majella.Phelan@hse.ie
    - Please put GP Smoking Cessation referral in email subject.
- **Letter** – Majella Phelan CMM2, Smoking cessation service, Cork University Maternity Hospital.
- **Phone** – 0871514202
- Contact details on CUMH website

Thank You

Right Care. Right Place. Right Time.

Introduction of the New Antenatal Care Pathways

Alex Campbell,
Registered Advanced Midwife Practitioner, Supported Care

9th May 2023

Why Change Antenatal Care Pathways?

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To promote:

- **Streamlined** person-centred visits during antenatal period.
- **Triage** at pre-booking to assess risk occurs ahead of in-person appointment with Midwife and Obstetric Consultant.
- **Standardise** antenatal **care & information** provided
- **GP visits** to **compliment** hospital/community appointments.
- **Increase midwifery led clinics** in the community, in line with National Maternity Strategy
- **Continuity of care** meet midwife at every routine visit
- **Antenatal and health education** at every midwife appointment

Antenatal Care Pathways

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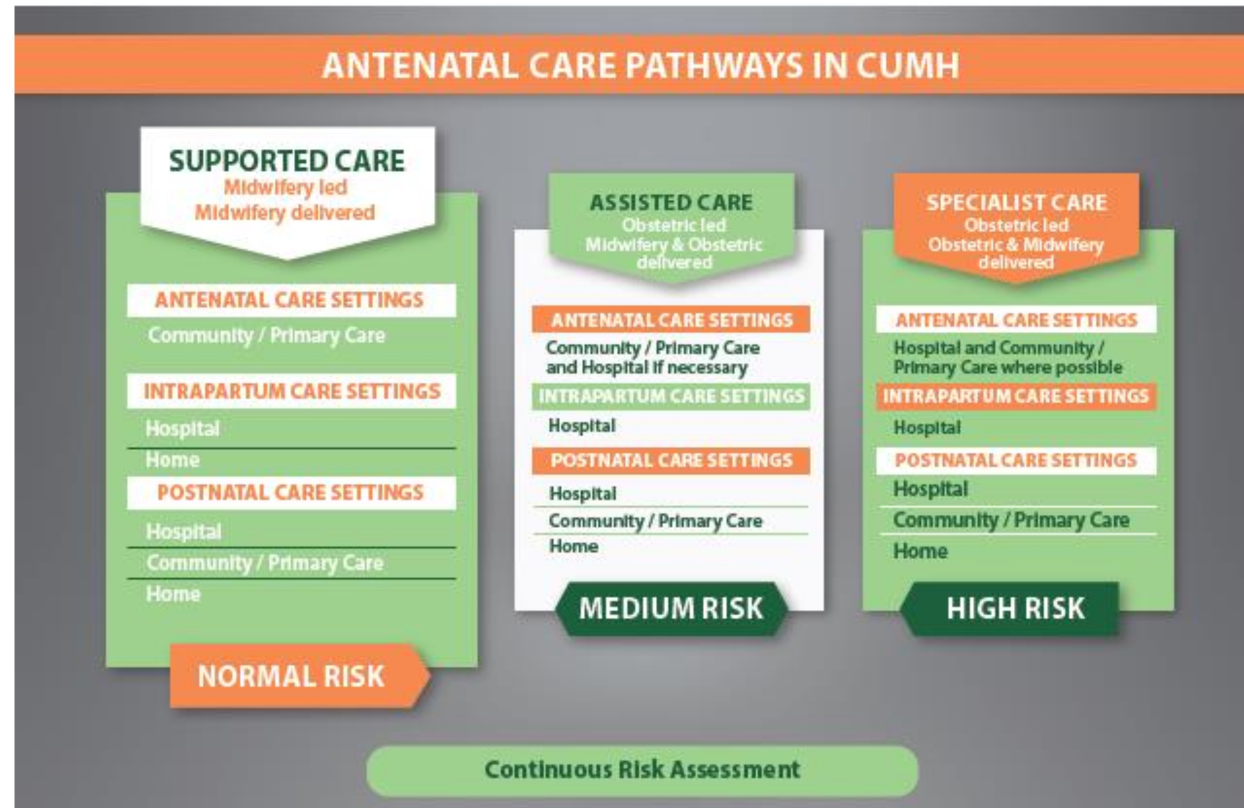
The National Maternity Strategy “Creating a Better Future Together” (2016) views childbirth as a natural life event however it also recognises that some women have higher care needs. Accordingly, the Strategy has designed one model of care with three care pathways for women progressing through the maternity system, depending on their level of risk:



Supported Care Pathway

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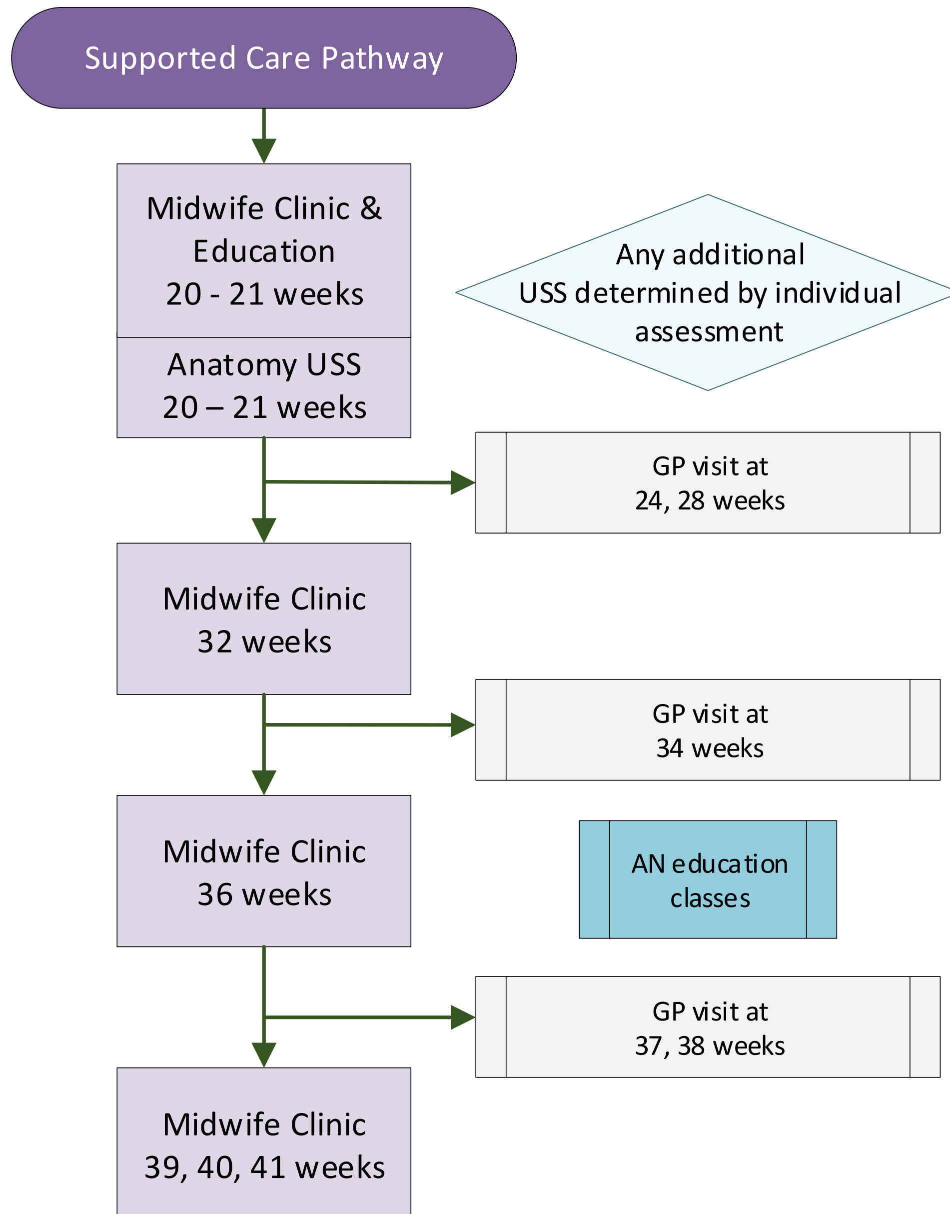


- The woman is respected as the primary decision maker and midwives assist her in this process through the provision of accurate and unbiased information on which to base informed choices.
- Recognising the benefits of community-based continuity of care, the Supported Care Pathway aims to provide women with holistic, safe midwifery care.
- Where deviations from the norm are suspected or identified, a multi-disciplinary approach to care will be adapted in collaboration with the woman.
- At each antenatal appointment, the health and well-being of the mother and baby will be assessed – any confirmed or suspected concerns are referred as appropriate.

Outreach Locations

Area	Health Centre	Day	Times
Carrigtwohill	Carrigtwohill Primary Care Centre T45 DT93	Mondays	All day
Carrigaline	Carrigaline Primary Care Centre P43 PX99	Tuesdays	All day
Gurranabraher	St Mary's Primary Care Centre T23 V09X	Wednesday, Fridays	All day
Mitchelstown	Living Health Clinic Primary Care Centre, Fermoy Rd., Mitchelstown, Co. Cork.	Wednesday	8am – 2pm
Mallow	Mallow Primary Care Centre, Gouldshill, Mallow, Co. Cork	Thursdays	8am – 2pm

***Ballincollig & Bantry have recently been confirmed as outreach locations. Clinics to commence soon**

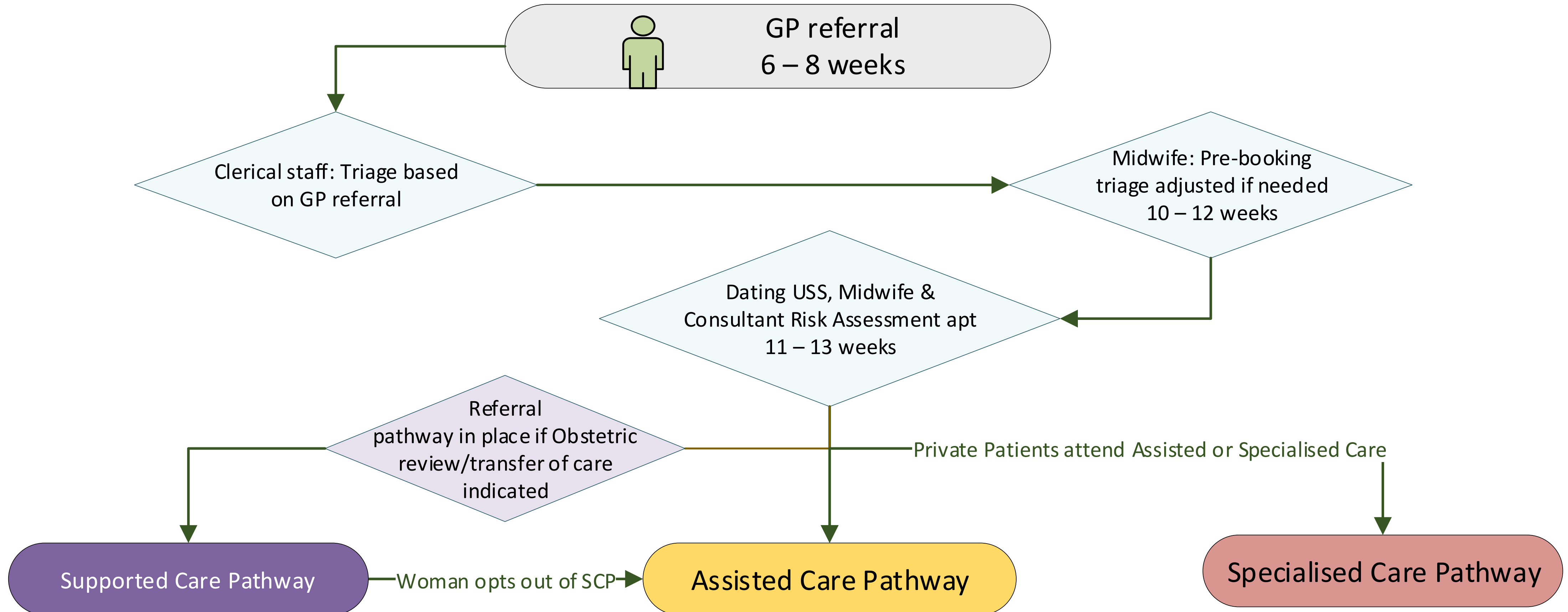
Women considered *normal-risk* can avail of midwifery led antenatal care through the Supported Care Pathway. Benefits include:

- **Easily accessible clinics**
- **Free parking**
- **Continuity of care**
- **Scan clinics**

The midwifery led clinics are set in a relaxing, comfortable environment around Cork city and county.

Regardless of the clinic location, care will be provided by CUMH staff, and **babies will be born in Cork University Maternity Hospital.**

Antenatal Care Pathways



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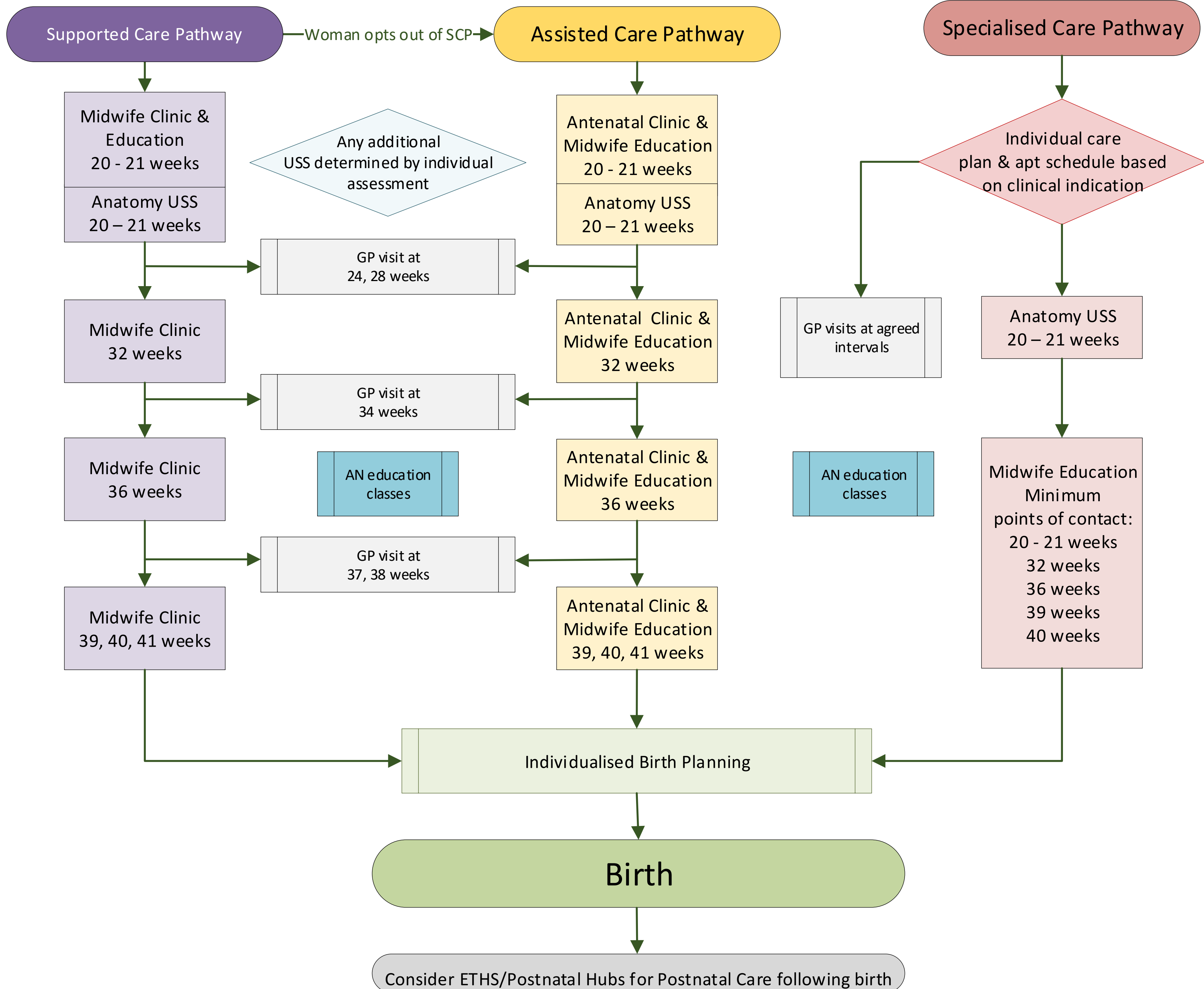
Thank You

Triaging and E-referrals

Dr Fergus McCarthy,
Consultant Obstetrician Gynaecologist

9th May 2023



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High-Risk Criteria

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Condition	Detail- for HIGH RISK	Consultant clinic	For ASSISTED RISK PATHWAY or SUPPORTED CARE PATHWAY	Consultant clinic
Autoimmune disease				
	Active, on treatment	Any high risk	Autoimmune disease – history stable, no treatment (Aspirin)	Any low risk
ardiovascular disease				
	A heart condition with haemodynamic consequences; Marfans and heart valves; previous cardiomyopathy, mitral stenosis/ aortic stenosis	Any high risk Thursday	bicuspid aortic valve- normal echo; palpitations; stable SVT; Potts syndrome	
Hypertension		Any high risk		
	Chronic hypertension, on medication	FMC	Hypertension, no medication (Aspirin baseline renal function and urinary PCR)	Any low risk
Cervix				
	Multiple LLETZ/Cone Biopsy	FMC	CIN1-III; single LLETZ procedure	Any low risk
Dermatological				
	Diseases requiring systemic treatments	Any high risk	Stable Cutaneous Lupus; Eczema/ Dermatitis	
Drug dependence or abuse		Any high risk		
	Excess Alcohol/Drug Misuse		History of misuse use of alcohol and other drugs	Any low risk
Endocrine		Any high risk		Any low risk
Diabetes Mellitus	Pre-existing insulin dependent or non-insulin dependent on medications		Gestational diabetes – diet only control	
			Gestational diabetes requiring insulin (all consultants with endocrine support)	
Thyroid disease	Hypothyroidism – new onset/unstable		Hypothyroidism – stable including on medication	
	Hyperthyroidism		Treated thyroid cancer	
	Addison's disease, Cushing's disease or other endocrine disorder requiring treatment		Addison's disease, Cushing's disease or other endocrine disorder not requiring treatment (may warrant discussion with PN Medicine)	
Gastroenterology		Any high risk		Any low risk
	Inflammatory bowel disease- this includes ulcerative colitis and Crohn's disease		Inflammatory bowel disease- this includes ulcerative colitis and Crohn's disease -PNM discussion PRN	
	Liver transplant; autoimmune liver (PBC/ PSC); cirrhosis		Gastroenterology Cholestasis Hepatitis B with positive serology Hepatitis C Gastric bypass surgery/other bariatric surgeries	
Genetic		Any high risk Monday		
	Maternal genetic issue with risk to offspring		Genetic-any condition - PNM discussion PRN	Any low risk
Haematological		Any high risk Monday		
	Thrombo-embolic conditions.	JH		
	Coagulation disorders			
	Platelet problems			
	Haemoglobinopathies		Anaemia, including issue with haematinic levels. Anaemia is defined as Hb<10g/dl, not responding to treatment	Any low risk

Condition	Detail- for HIGH RISK	Consultant clinic	For ASSISTED RISK PATHWAY or SUPPORTED CARE PATHWAY	Consultant clinic
Infectious Diseases Active disease		Any high risk		Any low risk
HIV	HIV- infection		Rubella - PNM discussion PRN	
			Varicella/zoster virus infection - PNM discussion PRN; IgG if mother non-immune	
			History of toxoplasmosis/ cytomegalovirus	
TB	Active tuberculous		Tuberculous, non-active	
Syphillis	Positive serology and not yet treated		Positive serology and treated	
	Primary infection			
			Herpes Genitalis: • Primary infection - PNM discussion PRN • Recurrent	
			Other (including but not exclusive) - PNM discussion PRN • Group B Streptococcus Concerns • Parasites • STD's • Listerosis	
Neurological		JH/JED		Any low risk
	Epilepsy, without medication			
	Epilepsy, with medication		Treated Subarachnoid haemorrhage, aneurysms AV malformations - B – Neurosurgery advice	
	Seizure disorder			
	Multiple sclerosis –active treatment		Multiple sclerosis – not on treatment	
	Myasthenia gravis			
	Spinal cord lesion			
	Previous stroke			
	Intracranial shunts			
	Spina bifida			
	Muscular Dystrophy or Myotonic Dystrophy			
Obesity				Any low risk
	BMI≥40	Mudathir	BMI ≥29 (Assisted care/supported care)	
Cancer		Any high risk		Any low risk
	Active Cancer and treatment		Oncology history- treated/ remission- all cancers	
Psychiatric disorders		Any high risk		
	Psychotic conditions on treatment (excluding stable depression/ anxiety)		• History only • Anxiety/ depression	Any low risk
	Previous puerperal psychosis			
Renal function disorders				
	Disorder in renal function with or without dialysis; renal transplant; chronic kidney disease	NR	• Urinary tract infection (Assisted care/supported care) • Recurrent UTI • Pyelonephritis	Any low risk

Condition	Detail- for HIGH RISK	Consultant clinic	For ASSISTED RISK PATHWAY or SUPPORTED CARE PATHWAY	Consultant clinic
Respiratory disease				
	Lung function disorder – severe asthma, Cystic Fibrosis, sarcoidosis on treatment	MOR	• Asthma (mild) (Assisted care/ supported care) • Asthma (moderate)-oral steroids in the last year and maintenance therapy	Any low risk
Rheumatology				
	Including rare maternal disorders such as systemic lupus erythematosus (SLE), anti-phospholipid syndrome (APS), scleroderma, rheumatoid arthritis, periarteritis nodosa, Raynaud's disease.	RG	Stable/ not active rheumatology disease e.g. ankylosing spondylitis not on treatment	
Uterine				
			Uterine Abnormalities	Any low risk
			History Of Uterine Surgery – Myomectomy, Hysterotomy	Any low risk
Previous Obstetric History				
	Active blood group incompatibility (Rh, Kell, Duffy, Kidd)	Any high risk Monday	ABO- incompability	Any low risk
	Cervical incompetence (and /or Shirodkar- procedure)	FMC	Caesarean Section	Any low risk
	Eclampsia/ preeclampsia (<34 weeks)	Any high risk	Fetal growth restriction	Any low risk
	Fetal growth restriction – delivery <34 weeks	RH	Hypertension in the previous pregnancy (Assisted care/ supported care)	Any low risk
	Spontaneous Pre-term birth (<34 weeks) in a previous pregnancy	FMC	Pre-term birth (<37 weeks) in a previous pregnancy (Assisted care/high risk care)	Any low risk
	Previous stillbirth	KOD/ NR		
	Previous neonatal death (link to previous consultant +/- history)	Any high risk		Any low risk
	Prior child with congenital and / or hereditary disorder	Any high risk Monday		Any low risk
	Placenta accreta	Any high risk	Pre-eclampsia in the previous pregnancy - PNM discussion PRN & Low dose Aspirin	Any low risk
	Recurrent miscarriage (3 or more times)	Any high risk	Recurrent miscarriage- x2 consecutive	Any low risk
			Postpartum depression (Assisted care/supported care)	Any low risk
			Postpartum haemorrage >500mls	Any low risk
	Second trimester IUD	KOD/ NR	Third or fourth degree perineal laceration - functional recovery - no/poor function recovery	Any low risk
Multiple Pregnancy		FMC		

High-Risk Criteria

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Endocrine		Any high risk		Any low risk
Diabetes Mellitus	**Pre-existing** insulin dependent or non-insulin dependent on medications		**Gestational diabetes** – diet only control	
			Gestational diabetes requiring insulin (all consultants with endocrine support)	
Thyroid disease	**Hypothyroidism** – new onset/unstable		**Hypothyroidism** – stable including on medication	

Specialist Teams

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Teams CUMH 2023	Gynae Onc A	Perinatal/ Fetal med B	Perinatal MDT C	Urogynae D	Fertility/ Endometriosis E	Gynae/ Ambulatory/ Early Pregnancy F
Consultants	John Coulter Matt Hewitt Zibi Marchocki	Dan McKenna Fergus McCrthy Keelin O'Donoghue Richard Horgan	Richard Greene John Higgins Noirin Russell Mairead O'Riordan Mudathir Abdelmaboud	Barry O'Reilly Suzanne O'Sullivan Orfthlaith O'Sullivan	Moya McMenamin Minna Geisler Cathy Burke Adriana Olaru	Karen McNamara Deirdre Hayes Ryan Anna Durand O'Connor

Membership MDT Antenatal Working Group

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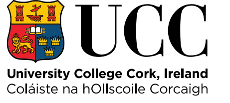
- Midwifery management
- OPD midwifery management
- Project manager
- Consultant rep
- NCHD rep
- Advanced midwife practitioner
- Domino services
- Early transfer home
- Postnatal Hubs rep
- Ultrasound
- Clerical rep
- Cerner CME
- Communications manager
- GP liaison

Antenatal Referral - Healthlink

E-referrals for antenatal patients ("new bookers") into Cork University Maternity Hospital (CUMH) will be available via Healthlink from the week commencing 15th May 2023.



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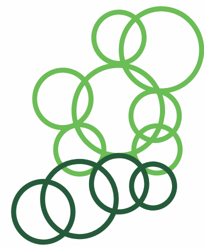

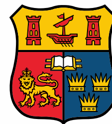

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Hot Topics in Antenatal Care

Dr Mairead O Riordan
Consultant Obstetrician & Gynaecology

09/05/2023

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Vitamin D

- Normal values
- At risk groups
- Supplementation Vs treatment
- Pregnancy specific outcomes
- Fetal /infant outcomes

Vitamin B12

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- Normal Values
- At risk groups
- Supplementation Vs treatment
  - Boots and Tesco 2.5Ug
  - Hydroxocobalmin Injections

Pregnacare 6ug

- Pregnancy specific outcomes
- Fetal /infant outcomes

Hypertension

- Continue treatment unless
  - Sustained systolic blood pressure is less than 110 mmHg or
  - Sustained diastolic blood pressure is less than 70 mmHg or •
  - Symptomatic hypotension. [2019]

- Offer antihypertensive treatment
  - Sustained systolic blood pressure of 140 mmHg or higher or
  - Sustained diastolic blood pressure of 90 mmHg or higher. [2019]

- When using medicines to treat hypertension in pregnancy, aim for a target blood pressure of 135/85 mmHg. [2019]

Nice Guidelines

Resources

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- https://www.nice.org.uk/guidance/ng133/resources/chronic-hypertension-prepregnancy-advice-pdf-8720711392
- https://www.nice.org.uk/guidance/ng133/resources/planning-care-for-women-at-moderate-and-high-risk-of-preeclampsia-pdf-8720711390

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ACOG COMMITTEE OPINION

Number 743

Committee on Obstetric Practice
Society for Maternal–Fetal Medicine
This Committee Opinion was developed by the Committee on Obstetric Practice in collaboration with committee member T. Flint Porter, MD, and the Society for Maternal–Fetal Medicine in collaboration with members Cynthia Gyamfi-Bannerman, MD, MS, and Tracy Manuck, MD.

Table 1. Clinical Risk Assessment for Preeclampsia*

Risk Level	Risk Factors	Recommendation
High[†]	• History of preeclampsia, especially when accompanied by an adverse outcome • Multifetal gestation • Chronic hypertension • Type 1 or 2 diabetes • Renal disease • Autoimmune disease (systemic lupus erythematosus, antiphospholipid syndrome)	Recommend low-dose aspirin if the patient has one or more of these high-risk factors
Moderate[‡]	• Nulliparity • Obesity (body mass index greater than 30) • Family history of preeclampsia (mother or sister) • Sociodemographic characteristics (African American race, low socioeconomic status) • Age 35 years or older • Personal history factors (eg, low birthweight or small for gestational age, previous adverse pregnancy outcome, more than 10-year pregnancy interval)	Consider low-dose aspirin if the patient has more than one of these moderate-risk factors[§]
Low	• Previous uncomplicated full-term delivery	Do not recommend low-dose aspirin

Gestational Diabetes

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Gestational diabetes mellitus	
	Venous plasma glucose treshold (mmol/L)
Fasting	≥ 5.1
75 g oGTT: 60 min	≥ 10.0
75 g oGTT: 120 min	≥ 8.5
One or more values equal or exceeding diagnostic threshold.	
Overt diabetes in pregnancy	
Measure of glycaemia	Diagnostic threshold
Fasting plasma glucose (FPG)*	≥ 7.0 mmol/L
HbA_{1c}	≥ 6.5% (48 mmol/mol)
Random plasma glucose*	≥ 11.1 mmol/L
Any of measures of glycaemia equal or exceeding diagnostic threshold.	
* venous plasma	

Long-term Progression

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- Cohort 1 (1978-1985)
  - 6 years 18% DM (4%Type 1 /14% Type 2)
  - 19 years, 37% DM (5% type 1 diabetes, 32% type 2 diabetes),29% had prediabetes, meaning only a third had normal glucose tolerance.
- Cohort 2 (1987 and 1996.)
  - 7 years 41% had diabetes (4% type 1 diabetes, 37% type 2 diabetes) and 26% had prediabetes [9].
- Risk of progression is 3-fold

Damm, P., Houshmand-Oeregaard, A., Kelstrup, L. *et al.* Gestational diabetes mellitus and long-term consequences for mother and offspring: a view from Denmark. *Diabetologia* **59**, 1396–1399 (2016). https://doi.org/10.1007/s00125-016-3985-5

Diabetologia (2020) 63:2123–2128
https://doi.org/10.1007/s00125-020-05215-3

SHORT COMMUNICATION

Type 1 and type 2 diabetes after gestational diabetes: a 23 year cohort study

Anna-Maaria Auvinen[1,2] · Kaisu Luiro[3] · Jari Jokelainen[4,5] · Ilkka Järvelä[6] · Mikael Knip[7,8,9] · Juha Auvinen[4,5] · Juha S. Tapanainen[1,2,3]

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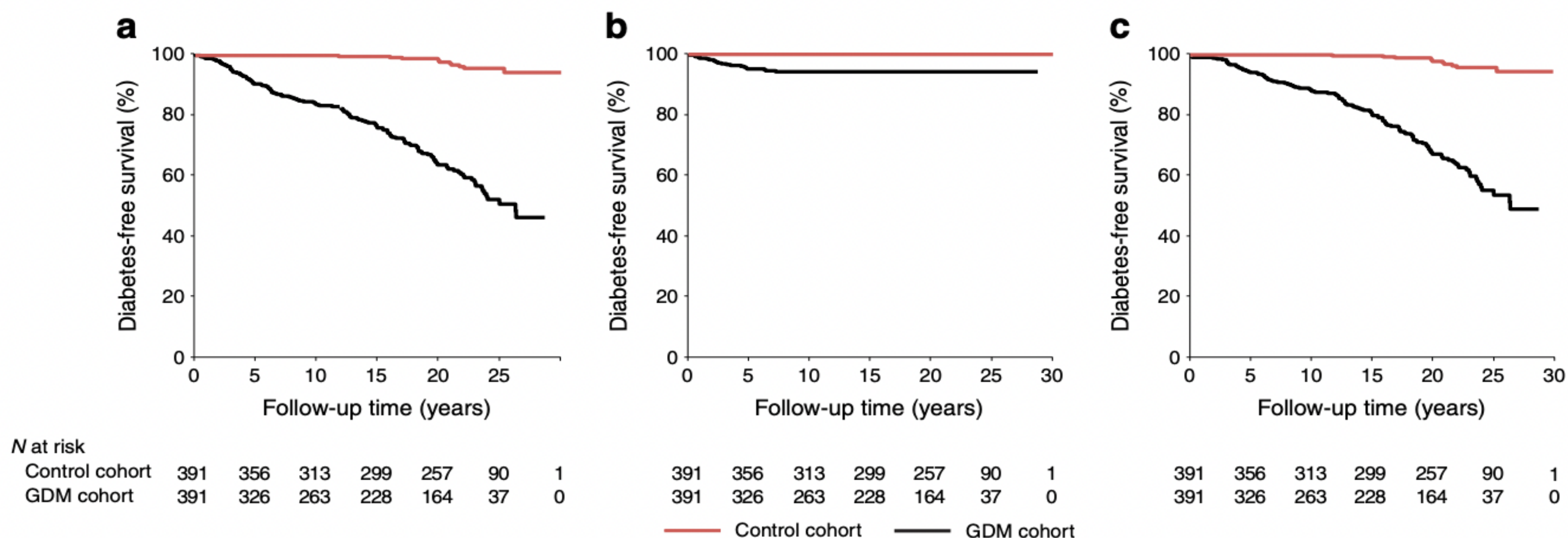

Fig. 1 Probability of remaining free from (**a**) diabetes, (**b**) type 1 diabetes or (**c**) type 2 diabetes among women with and without GDM. Logrank $p < 0.001$ in all figure parts. Mean (95% CI) diabetes-free survival time in women with vs without GDM was as follows: diabetes, 21.5 (20.5, 22.4) years vs 29.6 (29.3, 29.9) years; type 1 diabetes, 26.7 (25.8, 27.5) years vs no occurrence of type 1 diabetes; and type 2 diabetes, 22.6 (21.7, 23.5) years vs 29.6 (29.3, 29.9) years

Risk of Congenital Abnormalities

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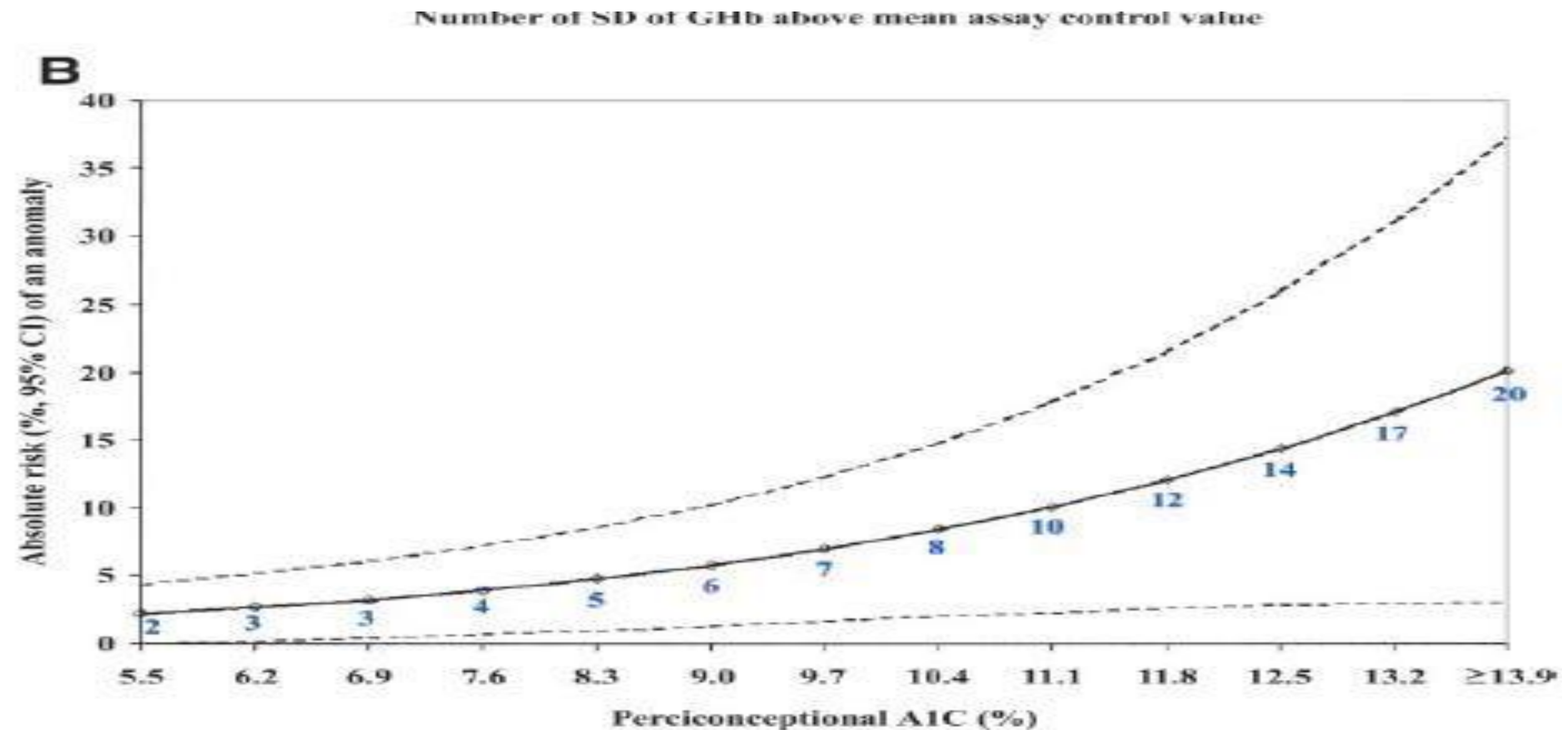

Figure 1—A: *Risk of a major or minor congenital anomaly according to the number of SDs of GHb above normal, measured periconceptionally. Data are presented as an absolute risk (solid line and blue values) ± lower and upper 95% CIs (dashed lines). B: Risk of a major or minor anomaly according to periconceptional A1C. *Data are presented as an absolute risk (solid line and blue values) ± 95% CIs (dashed lines).*

Guerin A, Nisenbaum R, Ray JG. Use of maternal GHb concentrationto estimate the risk of congenital anomalies in the offspring of women with prepregnancydiabetes. Diabetes Care. 2007 Jul;30(7):1920-5.

Thank You