International Federation of Gynecology and Obstetrics
FIGO Mission

- The International Federation of Gynecology and Obstetrics (FIGO) is a unique organization, being the only international professional body that brings together 130 obstetrical and gynecological associations from all over the world.

- FIGO is dedicated to the improvement of women’s health and rights and to the reduction of disparities in health care available to women and newborns as well as to advancing the science and practice of obstetrics and gynecology. The organization pursues its mission through advocacy, programmatic activities, capacity strengthening of member associations and education and training.
**International Federation of Gynecology and Obstetrics**  
**Working Group on Good Clinical Practice in Maternal-Fetal Medicine**

**Chair:** G C Di Renzo  
**Expert members:**  
E Fonseca, Brasil  
E Gratacos, Spain  
S Hassan, USA  
M Kurtser, Russia  
F Malone, Ireland  
S Nambiar, Malaysia  
M Sierra, Mexico  
K Nicolaides, UK  
H Yang, China

**Expert members ex officio:**  
C Fuchtner, FIGO  
M Hod, EAPM  
GH Visser, SM Committee  
E Castelazo, CBET Committee  
L Cabero, WG GDM  
V Berghella, SMFM  
Y Ville, ISUOG  
M Hanson, DOHaD, WG Nutrition  
PP Mastroiacovo, Clearinghouse  
JL Simpson, March of Dimes  
D Bloomer, GLOWM
International Federation of Gynecology and Obstetrics
Working Group on the Challenges of Labour and Delivery

Chair: R Romero

Expert members:
D Farine, Canada
MT Gervasi, Italy
J M. Robson, Ireland
T Duan, China
S Rosales, Mexico
T Kimura, Japan
L Yeo, Korea-USA

Expert members ex officio:
C N Purandare, FIGO
G C Di Renzo, FIGO
M Stark, NESA
GH Visser, SM Committee
E Castelazo, CBET Committee
C Lees, RCOG
A Conde’ Agudelo, NIH NICHD
D Bloomer, GLOWM
International Federation of Gynecology and Obstetrics
March of Dimes
Working Group on Preterm Birth Prevention

Chairs: J L Simpson
G C Di Renzo
Expert members:
Ernesto Castelazo
Mary D’Alton
Eduardo Fonseca
Chris Howson
Bo Jacobsson
James Martin
Jane Norman
T Y Leung

Expert members ex officio:
CN Purandare, FIGO
J Howse, March of Dimes
G Visser, SM Committee
D Bloomer, GLOWM
Jim Larson BCG
David Ferrero, BCG
Chair: M Hod

Expert members:
Mukesh Agarwal
Blami Dao
Gian Carlo Di Renzo
Hema Divakar
Eran Hadar
Anil Kapur

Expert members ex officio:
CN Purandare, FIGO
GH Visser, SM Committee
D Ayres do Campo, SM Comm
L Cabero, CBET Committee
D Bloomer, GLOWM
R Fabienke, Novo Nordisk
Good practice advice

• Folic acid supplementation
• Prediction and prevention of preterm birth
• Non invasive prenatal diagnosis and testing
Good practice advice

- Thyroid diseases in pregnancy
- MgSO4 use in obstetrics
- Appropriate use of ultrasound in pregnancy
- Hyperglycemia and pregnancy
Good practice advice
finalised in June 2016

- Aspirin Use in Pregnancy
- Iron deficiency anaemia
- Management of Twin Pregnancy
- Micronutrients in Pregnancy
Good practice advice

to be discussed on December 2016

• Intrauterine growth restriction
• Recurrent Miscarriage
• Prediction of pre eclampsia
Thyroid Gland

One of the largest endocrine gland

2 inch long, Butterfly shaped gland

Located front of the neck, below the larynx

It has two lobes (Right & Left)

Average weight 25-30g in adults (slightly more in women)

The thyroid makes two thyroid hormones
  • Thyroxine (T4)
  • Triiodothyronine (T3)
One of the largest endocrine gland
The thyroid makes two thyroid hormones
  • Thyroxine (T4)
  • Triiodothyronine (T3)

**Thyroid Gland Functions**

**Most of function due to T3**
- Growth & development
- Increasing rate of metabolism
- Increase metabolic rate in CVS → blood flow
- Regulating cerebral conduction in CNS
- Sleep
- Lipid metabolism

Thyroid functions

- Metabolic rate
- Cellular respiration
- Protein synthesis
- Maturation of nervous system
- Growth & maturation
When thyroid hormone levels in the blood are low, the pituitary releases more TSH.  
(↓ T4 & T3 ---↑ TSH)

When thyroid hormone (T4, T3) levels are high, the pituitary decreases TSH production.  
(↑ T4 & T3 --- ↓ TSH)

Increased TSH levels indicates..... Pituitary gland working extra hard to maintain normal circulating thyroid hormones!
Early Pregnancy

Serum Thyrotropin level decreases

Weak TSH effect of HCG
‘Spill over’
Increase in free Thyroxine

TSH: decreases in first trimester
TSH increases in second & third trimester

TT3 & TT4: rise in preg
FT3 & FT4: less altered

3. Thyroid disease and pregnancy. American Thyroid Association website.
The Nine Square Game

To evaluate our Thyroid patient

As per the AACE and ITS Guidelines
BASIC THYROID EVALUATION

THYROID STIMULATING HORMONE - TSH

FREE THYROXINE or FT4

LOW
NORMAL
HIGH
BASIC THYROID EVALUATION

FREE THYROXINE or FT4

THYROID STIMULATING HORMONE - TSH

LOW

NORMAL

HIGH

LOW

NORMAL

HIGH

EUTHYROID
BASIC THYROID EVALUATION

FREE THYROXINE or FT4

THYROID STIMULATING HORMONE - TSH

LOW
NORMAL
HIGH

LOW
NORMAL
HIGH

PRIMARY HYPOTHYROID
**BASIC THYROID EVALUATION**

<table>
<thead>
<tr>
<th>FREE THYROXINE or FT4</th>
<th>THYROID STIMULATING HORMONE - TSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>LOW</td>
</tr>
<tr>
<td>LOW</td>
<td>NORMAL</td>
</tr>
<tr>
<td>LOW</td>
<td>HIGH</td>
</tr>
<tr>
<td>NORMAL</td>
<td>LOW</td>
</tr>
<tr>
<td>NORMAL</td>
<td>NORMAL</td>
</tr>
<tr>
<td>NORMAL</td>
<td>HIGH</td>
</tr>
</tbody>
</table>

- **HIGH**: PRIMARY HYPERTHYROID
BASIC THYROID EVALUATION

FREE THYROIDINE or FT4

THYROID STIMULATING HORMONE - TSH

LOW | NORMAL | HIGH
--- | --- | ---
LOW | SECONDARY HYPOTHYROID |
<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Normal</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td>SECONDARY HYPERTHYROID</td>
</tr>
</tbody>
</table>

FREE THYROIDINE or FT4

THYROID STIMULATING HORMONE - TSH
FREE THYROXINE or FT4

BASIC THYROID EVALUATION

THYROID STIMULATING HORMONE - TSH

SUB-CLINICAL HYPERTHYROID

LOW  NORMAL  HIGH

LOW  NORMAL  HIGH
FREE THYROIDINE or FT4

BASIC THYROID EVALUATION

THYROID STIMULATING HORMONE - TSH

LOW
NORMAL
HIGH

LOW
NORMAL
HIGH

SUB-CLINICAL HYPOTHYROID
<table>
<thead>
<tr>
<th></th>
<th>LOW</th>
<th>NORMAL</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FREE THYROXINE or FT4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BASIC THYROID EVALUATION

- LOW
- NORMAL
- HIGH
- NON THYROID ILLNESS or NTI
BASIC THYROID EVALUATION

FREE THYROXINE or FT4

LOW
NORMAL
HIGH

NTI or Pt. on THYROID HORMONES

THYROID STIMULATING HORMONE - TSH
BASIC THYROID EVALUATION

FREE THYROXINE or FT4

HIGH

PRIMARY HYPERTHYROID

NTI or Pt. on HYROID HORMONES

SECONDARY HYPERTHYROID

NORMAL

SUB-CLINICAL HYPERTHYROID

EUTHYROID

SUB-CLINICAL HYPOTHYROID

LOW

SECONDARY HYPOTHYROID

NON THYROID ILLNESS - NTI

PRIMARY HYPOTHYROID

LOW

NORMAL

HIGH

THYROID STIMULATING HORMONE - TSH
<table>
<thead>
<tr>
<th>TEST</th>
<th>REFERENCE RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH</td>
<td>Normal Range 0.3 - 4.0 mU/L</td>
</tr>
<tr>
<td>Free $T_4$</td>
<td>Normal Range 0.7-2.1 ng/dL</td>
</tr>
</tbody>
</table>

TSH upper limit has been revised to 2.5 mU/L
Thyroid disease is the second most common cause of endocrine dysfunction in women of childbearing age.

Hypothyroidism is more common during pregnancy than hyperthyroidism.
CONCLUSIONS
Pearls for Practice

Hypothyroidism
- T4 essential for early fetal development
- Little T4 crosses placenta after 1st trim
- Adequate treatment – good outcome

Hyperthyroidism
- Careful D/D at early weeks
- Untreated - poor preg. Outcome
- Drugs cross placenta: lowest optimal dosage
- Cord blood - Thyroid function

Postpartum Thyroiditis
- Occurs 3-4 mths postpartum
- Autoimmune disorder
- Phases of hyper-hypo-recovery
- Annual thyroid function tests

Thyroid nodule & Cancer
- Defer preg. For 1 year after trt. With radioactive iodine
- Nodule identified beyond 20 weeks - biopsy after delivery
- Large goitre – anesthetic complications
FIGO recommends the following:

• Screening for thyroid function is recommended in the first trimester particularly in countries with a deficient iodine diet and in symptomatic patients.

• TSH is the superior method for screening. Free T4 and TPO Ab testing are not recommended for screening. The best reliable tests for TSH are by C.I.A or 3rd generation R.I.A (Radio Immuno Assay). Notably normal thyroid test values change in pregnancy.

• Treatment for hypothyroidism is recommended when TSH levels are >2.5 and >3.0 IU/L during the first and second/third trimesters respectively. The only replacement therapy is L-thyroxine. The starting doses of L-thyroxine are presented in fig. 4. Instead treating subclinical hypothyroidism, in the presence of negative thyroid auto-antibodies, is still debatable. Importantly, women on L-thyroxine before pregnancy should increase their dosage by 30-50% when they first recognize the pregnant state.

• Treatment of Hyperthyroidism due to Grave’s disease is by anti thyroid drugs (Propylthiouracil (PTU) or Carbimazole/Methimazole (MMI)). It is not recommended to change drugs during pregnancy Symptomatic (fig-1) treatment with beta- blockers for short term may be needed.

• Primary, prevention of hypothyroidism is by a healthy diet and iodised fortified salt (especially in iodine deficient areas).

• If the patient has a thyroid nodule she should be evaluated and treated during pregnancy. The first steps are performance of a thyroid ultrasonogram and a fine needle aspiration (FNA) as needed. Surgery should be preferably deferred to the postpartum period.

Follow up and postpartum TSH evaluation and reduction of L-thyroxine dose to pre-pregnant levels in patients with hypothyroidism.
CONCLUSIONS
FOCUS ON GLOBAL STRATEGIES

AMELIORATE OUR PROFESSION OVERCOMING THE LIMITS OF NATIONAL SOCIETIES
GUIDELINES: THE BEST PRACTICE ADVICE
GLOBAL STRATEGIES FOR:
PRETERM BIRTH PREVENTION
NON COMMUNICABLE DISEASES
PREVENTING EXPOSURE TO TOXIC CHEMICALS
Gathering data on maternal mortality and maternal health is notoriously difficult.

However, one thing is clear from all the statistics: although maternal and perinatal mortality and morbidity is falling globally, the perspectives for women-infants in poor resources countries are much worst than for those in industrialised countries.
Window of Opportunity

Pregnancy offers a window of opportunity to provide maternal care services to mother and offspring.

Reduce traditional maternal and perinatal morbidity and mortality indicators.

Address intergenerational prevention of preterm birth and NCDs, such as diabetes, hypertension, cardiovascular disease, and stroke.
On Sept 2015 the UN General Assembly adopted the “Agenda 2030: Transforming our World”, with a consensus of the World Government Community - introduced 17 sustainable development goals SDGs. Many of the suggested SDG’s have Environmental and Reproductive health embedded in their goals.
It is a sheer co-incidence that September 2015 witnessed the 20th anniversary of the Beijing World Conference on Women under the slogan -“Planet 50-50 by 2030: Set it up for Gender Equality”.

‘The Agenda 2030; Transforming our world’ or Planet 50-50 by 2030’ i.e. SDGs will not materialise without the contribution of 50% of its population i.e. women - This can be achieved only with gender equality, equal education and employment opportunities + providing sexual reproductive health and rights.

Reproductive Health and Rights will not be complete unless we improve environmental Health

FIGO was not and will not be a passive observer to bring about this required change and will act to make these dreams real for women.