

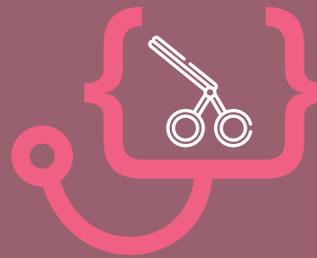


सत्यमेव जयते

Department of Health Research
Ministry of Health and Family Welfare, Government of India



icmr
INDIAN COUNCIL OF
MEDICAL RESEARCH
Serving the nation since 1911

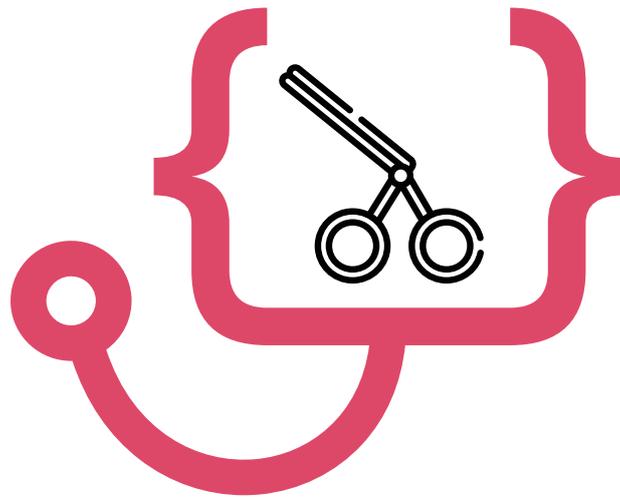


2022 Edition, Vol.III

STANDARD TREATMENT WORKFLOWS *of India*

PARTNERS





STANDARD
TREATMENT
WORKFLOWS
of India



सत्यमेव जयते

Department of Health Research

Ministry of Health and Family Welfare, Government of India



icmr
INDIAN COUNCIL OF
MEDICAL RESEARCH
Serving the nation since 1911

These STWs have been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (stw.icmr.org.in) for more information.

© Indian Council of Medical Research and Department of Health Research, Ministry of Health & Family Welfare, Government of India.

Suggested Citation: Standard Treatment Workflows of India, 2022, Edition, Vol. 3, New Delhi, Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India.

© DHR and ICMR

All rights reserved. No part of these workflows may be transmitted or reproduced in any form or by any means without prior permission from the organization.

Printed in India

CONTENTS

- INTRODUCTION
- SPECIALITIES COVERED IN THIS EDITION

- **Infertility**

- Female Infertility



Department of Health Research
Ministry of Health and Family Welfare, Government of India



icmr
INDIAN COUNCIL OF
MEDICAL RESEARCH
Established in the year 1947

INTRODUCTION

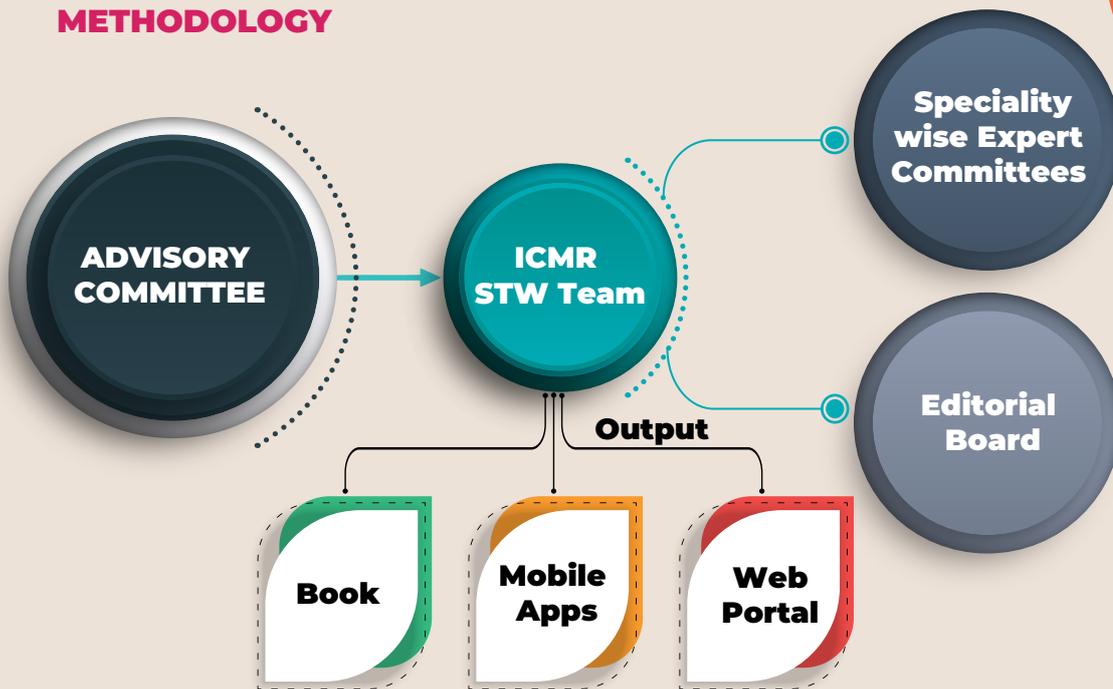
GOAL

To empower the primary, secondary and tertiary health care physicians/surgeons towards achieving the overall goal of Universal Health Coverage with disease management protocols and pre-defined referral mechanisms by decoding complex guidelines.

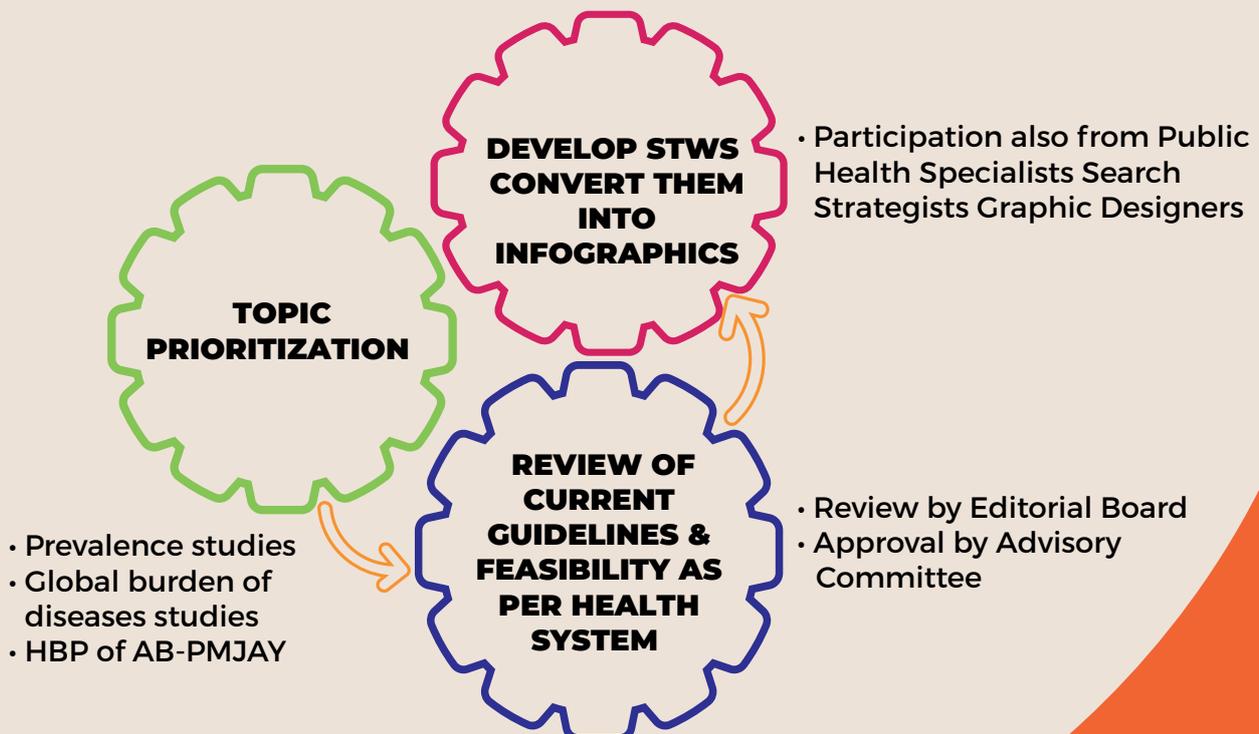
OBJECTIVES

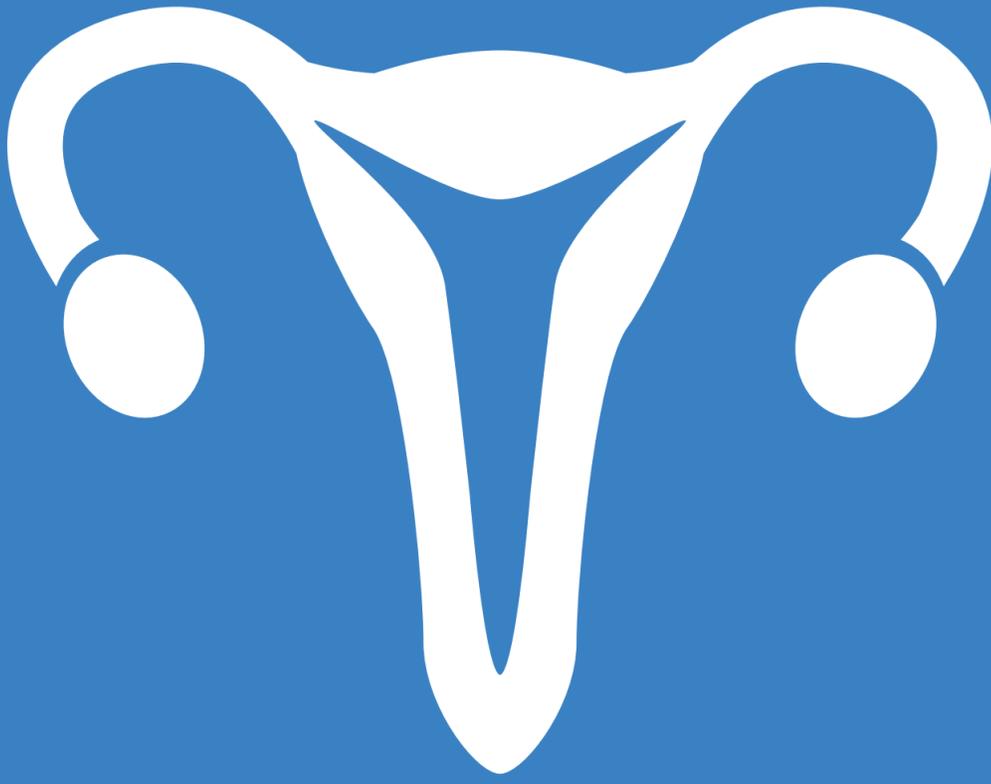
To formulate treatment algorithms for common and serious medical & surgical conditions for both outdoor & indoor patient management at primary, secondary and tertiary levels of India's healthcare system that are scientific, robust and locally contextual.

METHODOLOGY

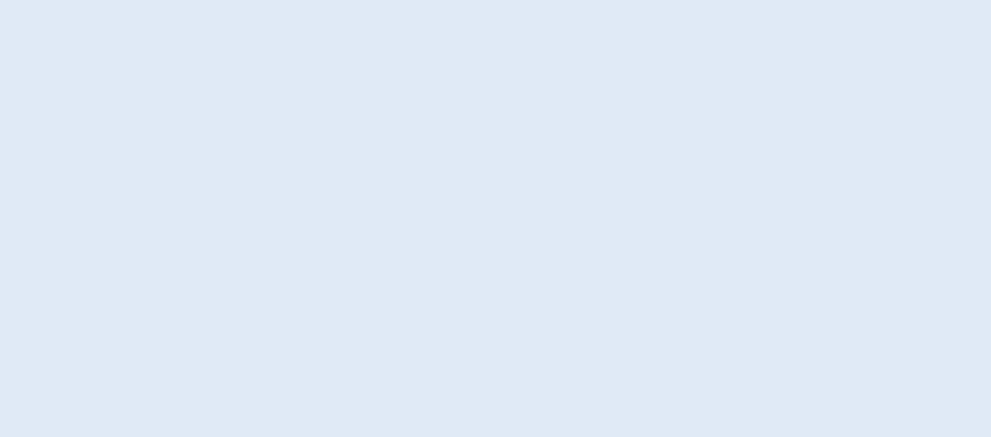


PROCESS OVERVIEW





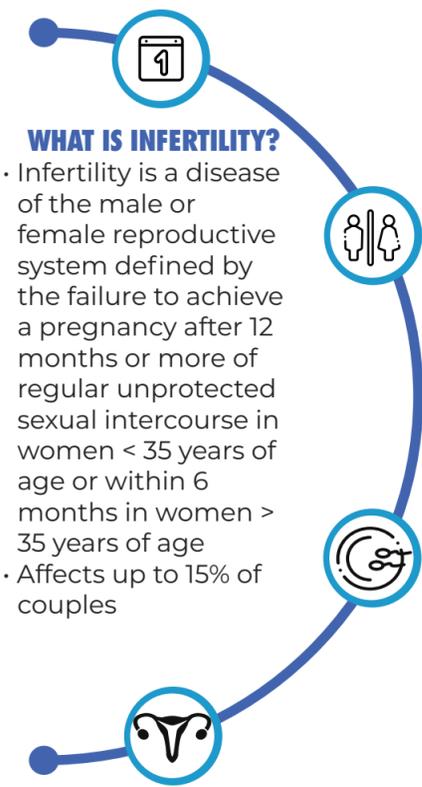
INFERTILITY





Standard Treatment Workflow (STW) for FEMALE INFERTILITY

ICD-10-N97



WHEN TO SUSPECT INFERTILITY?

- Any couple who by definition has infertility
- Those with high risk of infertility
 - Women > 35 years: Expedited evaluation
 - Women >40 years: Immediate evaluation
 - Oligomenorrhea or amenorrhea
 - Known or suspected uterine, tubal, or peritoneal disease
 - History of tubal/ovarian surgery
 - History of chemotherapy/radiotherapy
 - Any female with endometriosis
 - Known or suspected male infertility

HISTORY OF THE COUPLE

HISTORY

- Duration of Infertility/Contraceptive use
- Fertility in previous/current relationships
- Previous fertility investigations/treatment

MEDICAL HISTORY

MENSTRUAL HISTORY

- Menarche
- Cycle length & duration of flow
- Dysmenorrhea
- Amenorrhea episodes
- HMB/IMB

OBSTETRIC HISTORY

- Number of previous pregnancies (MTP/miscarriage/ectopic preg)
- Time to initiate previous pregnancies

PAST HISTORY

- Chronic illness like chronic hypertension, diabetes mellitus, arthritis, tuberculosis

DRUG HISTORY

- Agents causing increased Prolactin / Chemotherapy/ Radiotherapy/anabolic steroids/ anti-androgens

SURGICAL HISTORY

- Previous abdominal/pelvic/gynecological surgeries

OCCUPATIONAL HISTORY

- Work patterns including separation from partner
- Exposure to chemicals or high temperature

SEXUAL HISTORY

- Coital frequency, timing, knowledge of fertile period
- Dyspareunia
- Postcoital bleeding

PERSONAL HISTORY

- History of smoking, alcohol intake, substance abuse
- Vigorous exercise/eating disorder

PHYSICAL EXAMINATION OF FEMALE

General

- Height
- Weight
- BMI
- Waist circumference
- Blood pressure
- Fat & Hair distribution
- Acne
- Acanthosis nigricans
- Thyroid examination
- Breast examination

Abdominal

- Abdominal mass & tenderness
- Type and site of scars

Pelvis

- Assess state of hymen, clitoris and labia
- Look for vaginal infection, septum, endometriotic deposits
- Check for cervical polyps
- Accessibility of cervix for insemination
- Uterine size, position, mobility and tenderness
- Adnexal fornices tenderness
- Cervical smear

PHYSICAL EXAMINATION OF MALE

Refer to STW for the management of male infertility (ICD-10-N46.9), STW Volume 1, 2019

EVALUATION OF FEMALE

ESSENTIAL INVESTIGATIONS

Baseline ultrasound (Transvaginal ultrasound) to assess

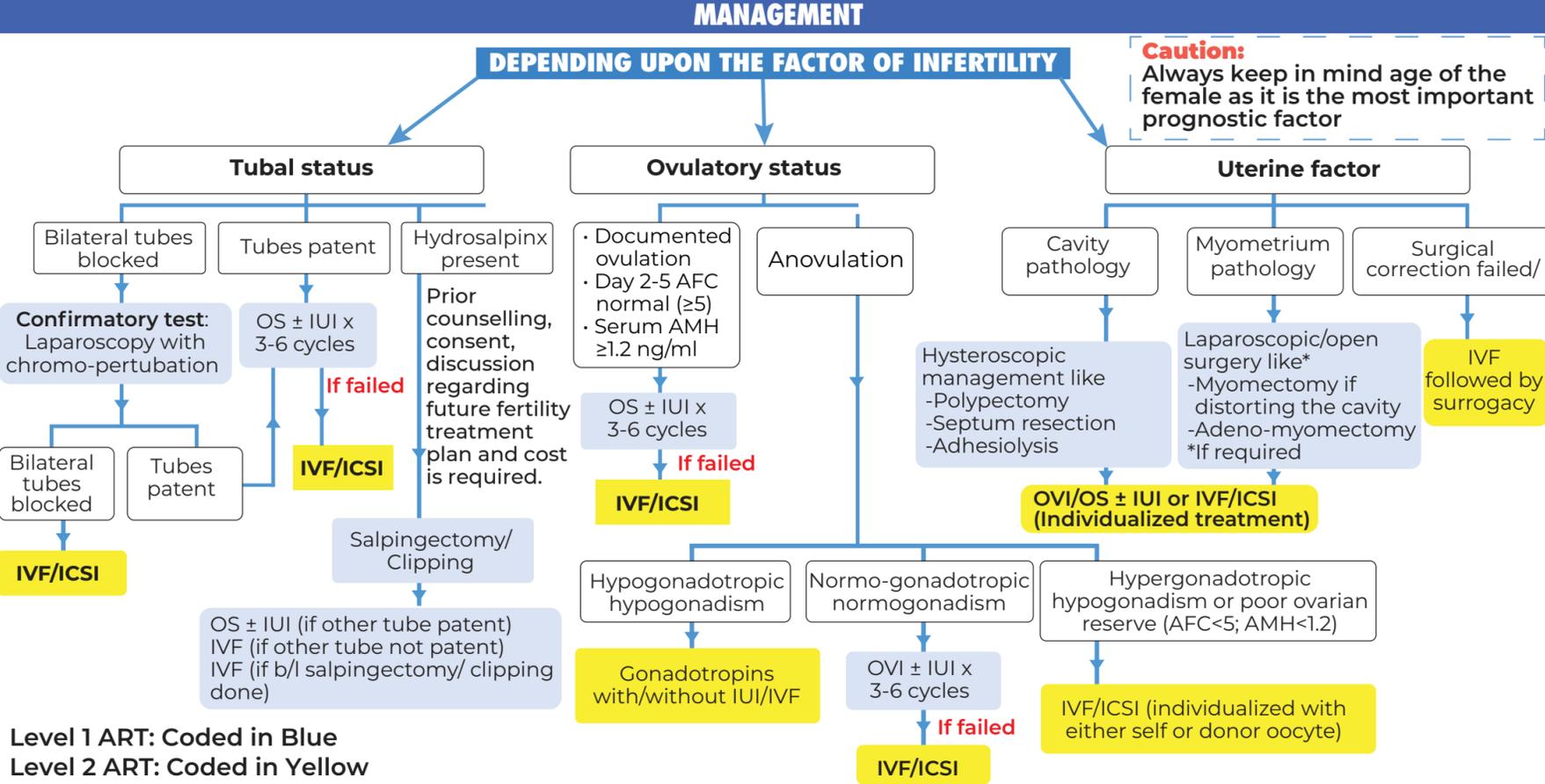
- Uterus:** Look for endometrial thickness, pattern, any space occupying lesions like fibroid, adenomyosis, polyp or mullerian anomalies
- Adnexa:** Look for any hydrosalpinx or para-ovarian cyst
- Ovary:** Note the antral follicle count (Day 2-5 of menstrual cycle), volume, position, characterization of cyst if present
- POD:** Note presence of free fluid

Test for tubal patency

- Hysterosalpingography (HSG)

OPTIONAL INVESTIGATIONS

- Endometrial aspiration for AFB/PCR: to rule out tuberculosis
- Serum AMH
- Viral markers: HIV, HBsAg, HCV
- VDRL
- Rubella IgM/IgG
- Day 2/3 FSH, LH,
- Serum TSH, Prolactin



ABBREVIATIONS

AFB: Acid fast bacilli	HCV: Hepatitis C Virus	LH: Luteinizing hormone
AFC: Antral follicle count	HIV: Human immunodeficiency virus	OS: Ovarian stimulation
AMH: Anti-mullerian hormone	HMB: Heavy menstrual bleeding	OVI: Ovulation induction
ART: Assisted reproductive technology	ICSI: Intracytoplasmic sperm injection	PCR: Polymerase chain reaction
BMI: Body mass index	IMB: Inter menstrual bleeding	POD: Pouch of Douglas
FSH: Follicular stimulating hormone	IUI: Intrauterine insemination	TSH: Thyroid stimulating hormone
HBsAg: Hepatitis B antigen	IVF: In vitro fertilization	VDRL: Venereal disease research laboratory test

REFERENCES

- World Health Organization (WHO). International Classification of Diseases, 11th Revision (ICD-11) Geneva: WHO 2018
- NICE 2017. Fertility problems: assessment and treatment. 2017; 51
- Penzias A et al. Fertility evaluation of infertile women: a committee opinion. Fertility and Sterility. 2021

FOLLOW EVIDENCE BASED INDIVIDUALIZED TREATMENT

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (stw.icmr.org.in) for more information.

© Indian Council of Medical Research and Department of Health Research, Ministry of Health & Family Welfare, Government of India.

CONTRIBUTORS

ADVISORY COMMITTEE

CHAIRMAN

Prof. (Dr.) Balram Bhargava, Secretary-DHR and DG-ICMR

VICE CHAIRMAN

Dr. Nikhil Tandon, AIIMS, New Delhi

MEMBERS

Dr. Anil Bhansali, Endocrinology, PGIMER, Chandigarh

Mrs. Anu Nagar, Jt. Secretary, Dept. of Health Research, MoHFW, Govt. of India

Dr. Ashok Deorari, Neonatology, AIIMS, New Delhi

Dr. Binod K Khaitan, Dermatology, AIIMS, New Delhi

Dr. Pramod Garg, Gastroenterology, TISHTI, Faridabad

Dr. Radhika Tandon, Ophthalmology, AIIMS, New Delhi

Dr. Rajdeep Singh, General Surgery, MAMC, New Delhi

Dr. S. C. Goel, Orthopaedics, BHU, Varanasi

Dr. Sandeep Agarwala, Paediatrics, AIIMS, New Delhi

Dr. Sudeep Gupta, Oncology, TMC, Mumbai

Dr. T. Sundararaman, Former Executive Director, NHSRC, New Delhi

Dr. Usha Dutta, Gastroenterology, PGIMER, Chandigarh

Ex officio Additional Secretary & MD (NHM), MoHFW, Govt. of India

Ex officio Director General Health Services / Representative

EDITORIAL BOARD

EXTERNAL COMMITTEE

Dr. Anil Bhansali, Endocrinology, PGIMER, Chandigarh

Dr. Anurag Srivastava, Oncology, AIIMS, New Delhi

Dr. Deepika Pandhi, Dermatology, UCMS, New Delhi

Dr. Neeraj Gupta, Paediatrics, AIIMS, Jodhpur

Dr. Radhika Tandon, Ophthalmology, RP Centre, AIIMS, New Delhi

Dr. Rajdeep Singh, General Surgery, MAMC, New Delhi

Dr. Usha Dutta, Gastroenterology, PGIMER, Chandigarh

Dr. Vijay Jain, Orthopaedics, RML, New Delhi

INTERNAL COMMITTEE

Dr. R S Dhaliwal, Scientist G & Head (NCD), ICMR

Dr. Ashoo Grover, Scientist F, ICMR

Dr. Lokesh Kumar Sharma, Scientist E, ICMR

Dr. Aparna Mukherjee, Scientist E, ICMR

Dr. Jerin Jose Cherian, Scientist D, ICMR

Dr. Saumya Srivastava Aggarwal, Project Scientist C, ICMR

EXPERT GROUPS

INFERTILITY

CHAIR

Dr. Neeta Singh, AIIMS, New Delhi

MEMBERS

Dr. Garima Patel, AIIMS, New Delhi

Lt Col (Dr.) Prashant Sharma, AHRR, New Delhi

Dr. Rajapriya Ayyappan, SPH, Chennai

Dr. Reema Mukherjee, ICMR, New Delhi

Dr. Shalini Gainer, PGIMER, Chandigarh

Dr. Sonu Balhara, ARTEMIS, Gurgaon

CHIEF PATRON

Dr Mansukh Mandaviya

Union Minister for Health & Family Welfare

PATRON

Dr Bharati Pravin Pawar

Union Minister of State for Health & Family Welfare

ADVISOR

Prof. Dr Balram Bhargava

Secretary, DHR & Director General, ICMR

ICMR STW TEAM

Dr R S Dhaliwal, Scientist G & Head(NCD), ICMR

Dr Ashoo Grover, Scientist F, ICMR

Dr Lokesh Kumar Sharma, Scientist E, ICMR

Dr Jerin Jose Cherian, Scientist D, ICMR

Mr Neeraj Parmar, Technical Officer A, ICMR

Dr Saumya Srivastava Aggarwal, Project Scientist C, ICMR

Mr Dhiraj Kumar, Project Graphics Designer, ICMR

ADMINISTRATION

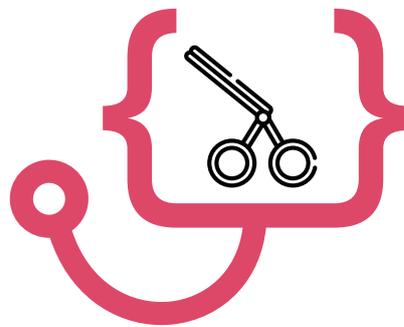
Shri R. Ramakrishnan, Sr DDG (Admin.), ICMR

Shri Rajeev Roy, Sr FA, ICMR

Dr R Lakshminarayanan, DDG(Admin.), ICMR

Shri Jagdish Rajesh, ADG (Admin.), ICMR

Shri Vinod Sharma, ADG(Finance), ICMR



STANDARD
TREATMENT
WORKFLOWS
of India

Scan to access Standard Treatment Workflows



Web Portal



Google Play



App Store



Department of Health Research
Ministry of Health and Family Welfare, Government of India



icmr
INDIAN COUNCIL OF
MEDICAL RESEARCH
Serving the nation since 1911

STANDARD TREATMENT WORKFLOWS *of India*



PARTNERS



2022 EDITION
VOLUME III