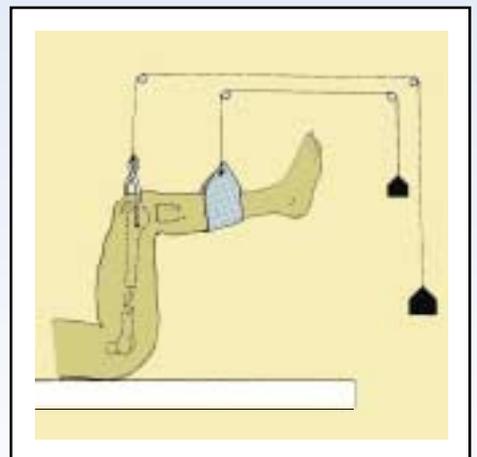
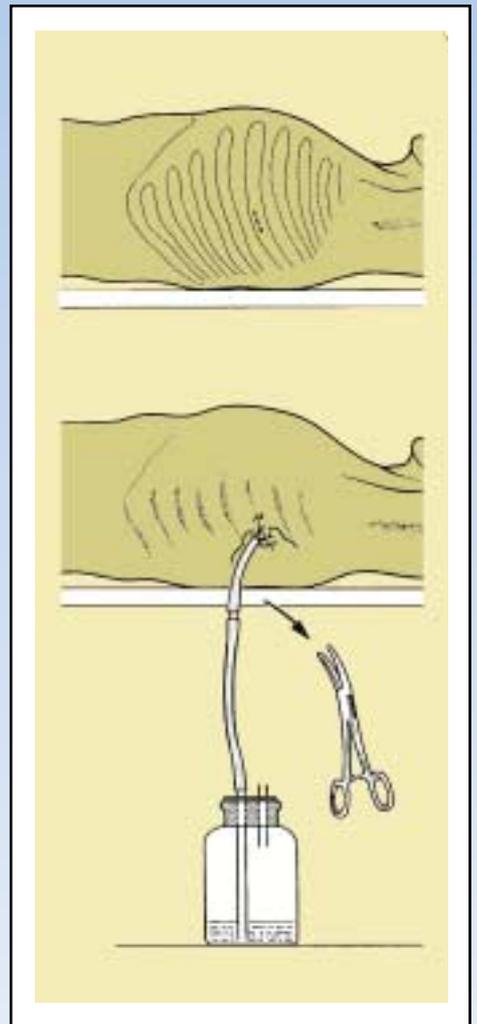
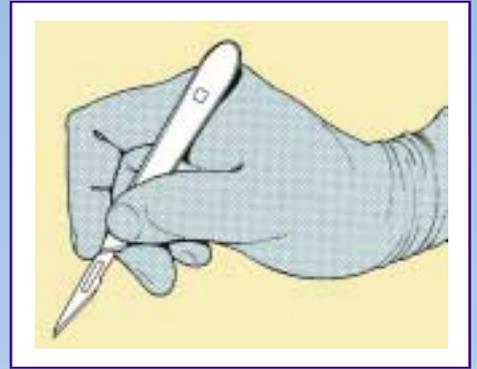


# Surgical Care at the District Hospital



World Health Organization

# **Surgical Care at the District Hospital**



**World Health Organization**

WHO Library Cataloguing-in-Publication Data

Surgical care at the district hospital.

1. Surgery – methods 2. Surgical procedures, Operative – methods 3. Anesthesia – methods  
4. Wounds and injuries – surgery 5. Hospitals, District – organization and administration 6. Pregnancy complications – surgery 7. Manuals I. World Health Organization.

Incorporates: Primary trauma care manual.

ISBN 92 4 154575 5

(NLM classification: WO 39)

© **World Health Organization 2003**

All rights reserved. Publications of the World Health Organization can be obtained from Marketing and Dissemination, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel: +41 22 791 2476; fax: +41 22 791 4857; email: [bookorders@who.int](mailto:bookorders@who.int)). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to Publications, at the above address (fax: +41 22 791 4806; email: [permissions@who.int](mailto:permissions@who.int)).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization does not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Typeset in London

Printed in Malta by Interprint Limited

---

# Contents

Preface

Acknowledgements

Introduction

## **PART 1: ORGANIZING THE DISTRICT HOSPITAL SURGICAL SERVICE**

### **1 Organization and management of the district surgical service**

1.1	The district hospital	1–1
1.2	Leadership, team skills and management	1–2
1.3	Ethics	1–7
1.4	Education	1–9
1.5	Record keeping	1–13
1.6	Evaluation	1–15
1.7	Disaster and trauma planning	1–17

### **2 The surgical domain: creating the environment for surgery**

2.1	Infection control and asepsis	2–1
2.2	Equipment	2–4
2.3	Operating room	2–6
2.4	Cleaning, sterilization and disinfection	2–11
2.5	Waste disposal	2–13

## **PART 2: FUNDAMENTALS OF SURGICAL PRACTICE**

### **3 The surgical patient**

3.1	Approach to the surgical patient	3–1
3.2	The paediatric patient	3–6

### **4 Surgical techniques**

4.1	Tissue handling	4–1
4.2	Suture and suture technique	4–2
4.3	Prophylaxis	4–10

---

---

## **5 BASIC SURGICAL PROCEDURES**

5.1	Wound management	5-1
5.2	Specific lacerations and wounds	5-5
5.3	Burns	5-13
5.4	Foreign bodies	5-16
5.5	Cellulitis and abscess	5-19
5.6	Excision and biopsies	5-30

## **PART 3: THE ABDOMEN**

### **6 Laparotomy and abdominal trauma**

6.1	Laparotomy	6-1
6.2	Abdominal trauma	6-4

### **7 Acute abdominal conditions**

7.1	Assessment and diagnosis	7-1
7.2	Intestinal obstruction	7-2
7.3	Peritonitis	7-4
7.4	Stomach and duodenum	7-5
7.5	Gallbladder	7-8
7.6	Appendix	7-10

### **8 Abdominal wall hernia**

8.1	Groin hernias	8-1
8.2	Surgical repair of inguinal hernia	8-2
8.3	Surgical repair of femoral hernia	8-6
8.4	Surgical treatment of strangulated groin hernia	8-8
8.5	Surgical repair of umbilical and para-umbilical hernia	8-9
8.6	Surgical repair of epigastric hernia	8-10
8.7	Incisional hernia	8-10

### **9 Urinary tract and perineum**

9.1	The urinary bladder	9-1
9.2	The male urethra	9-6
9.3	The perineum	9-16

## **PART 4: EMERGENCY OBSTETRIC CARE**

### **10 Hypertension in pregnancy**

10.1	Hypertension	10-1
10.2	Assessment and management	10-3
10.3	Delivery	10-8
10.4	Postpartum care	10-8
10.5	Chronic hypertension	10-9
10.5	Complications	10-9

---

---

## **11 Management of slow progress of labour**

11.1 General principles	11-1
11.2 Slow progress of labour	11-3
11.3 Progress of labour	11-9
11.4 Operative procedures	11-13

## **12 Bleeding in pregnancy and childbirth**

12.1 Bleeding	12-1
12.2 Diagnosis and initial management	12-3
12.3 Specific management	12-6
12.4 Procedures	12-15
12.5 Aftercare and follow-up	12-35

## **PART 5: RESUSCITATION AND ANAESTHESIA**

### **13 Resuscitation and preparation for anaesthesia and surgery**

13.1 Management of emergencies and cardiopulmonary resuscitation	13-1
13.2 Other conditions requiring urgent attention	13-10
13.3 Intravenous access	13-11
13.4 Fluids and drugs	13-15
13.5 Drugs in resuscitation	13-18
13.6 Preoperative assessment and investigations	13-20
13.7 Anaesthetic issues in the emergency situation	13-27
13.8 Important medical conditions for the anaesthetist	13-36

### **14 Practical anaesthesia**

14.1 General anaesthesia	14-1
14.2 Anaesthesia during pregnancy and for operative delivery	14-12
14.3 Paediatric anaesthesia	14-14
14.4 Conduction anaesthesia	14-21
14.5 Specimen anaesthetic techniques	14-25
14.6 Monitoring the anaesthetized patient	14-34
14.7 Postoperative management	14-45

### **15 Anaesthetic infrastructure and supplies**

15.1 Equipment and supplies for different level hospitals	15-1
15.2 Anaesthesia and oxygen	15-5
15.3 Fires, explosions and other risks	15-11
15.4 Care and maintenance of equipment	15-12

---

---

## **PART 6: TRAUMATOLOGY AND ORTHOPAEDICS**

### **16 Acute trauma management**

16.1 Trauma in perspective	16-1
16.2 Principles of Primary Trauma Care	16-2
16.3 Six phases of Primary Trauma Care	16-3
16.3 Procedures	16-8

### **17 Orthopaedic techniques**

17.1 Traction	17-1
17.2 Casts and splints	17-6
17.3 Application of external fixation	17-10
17.4 Diagnostic imaging	17-12
17.5 Physical therapy	17-13
17.6 Cranial burr holes	17-15

### **18 Orthopaedic trauma**

18.1 Upper extremity injuries	18-1
18.2 The hand	18-11
18.3 Fractures of the pelvis and hip	18-14
18.4 Injuries of the lower extremity	18-17
18.5 Spine injuries	18-25
18.6 Fractures in children	18-28
18.7 Amputations	18-31
18.8 Complications	18-33
18.9 War related trauma	18-36

### **19 General orthopaedics**

19.1 Congenital and developmental problems	19-1
19.2 Bone tumours	19-4
19.3 Infection	19-5
19.4 Degenerative conditions	19-8

## **ANNEX**

### **Primary Trauma Care Manual: Trauma Management in Remote and District Locations**

---

---

# Preface

Many patients who present to district (first-referral) level hospitals require surgical treatment for trauma, obstetric, abdominal and orthopaedic emergencies. Often surgery cannot be safely postponed to allow their transfer to a secondary or tertiary-level hospital, but many district hospitals in developing countries have no specialist surgical teams and are staffed by medical, nursing and paramedical personnel who perform a wide range of surgical procedures, often with inadequate training. The quality of surgical and acute care is often further constrained by poor facilities, inadequate low-technology apparatus and limited supplies of drugs, materials and other essentials.

All these factors contribute to unacceptable rates of mortality resulting from trauma, obstetric complications and non-traumatic surgical disorders as well as disability resulting from injury.

District hospitals should be able to manage all common surgical and obstetric procedures. However, the establishment and maintenance of effective district surgical services requires:

- Personnel with appropriate education and training
- Practical continuing education programmes in clinical management to maintain quality in care
- Appropriate physical facilities
- Suitable equipment and instruments
- A reliable system for the supply of drugs and medications, surgical materials and other consumables
- A quality system, including standards, clinical guidelines, standard operating procedures, records and audit.

The mission of the team responsible for Devices and Clinical Technology in the World Health Organization Department of Blood Safety and Clinical Technology (WHO/BCT) is to promote the quality of clinical care through the identification, promotion and standardization of appropriate procedures, equipment and materials, particularly at district hospital level.

WHO/BCT has identified education and training as a particular priority

预览已结束，完整报告链接和

<https://www.yunbaogao.cn/report/index/report?r>