

Surgical site infection PREVENTION in the PRIMARY HEALTH CARE setting



Click on the icons
to access dedicated
resources

Preoperative
surgical antibiotic
prophylaxis (SAP)



Surgical
site (skin)
preparation



Surgical hand
preparation



Hair
removal



Preoperative
bathing



Drapes
and gowns



OR room
discipline

Environmental
cleaning



SAP
prolongation



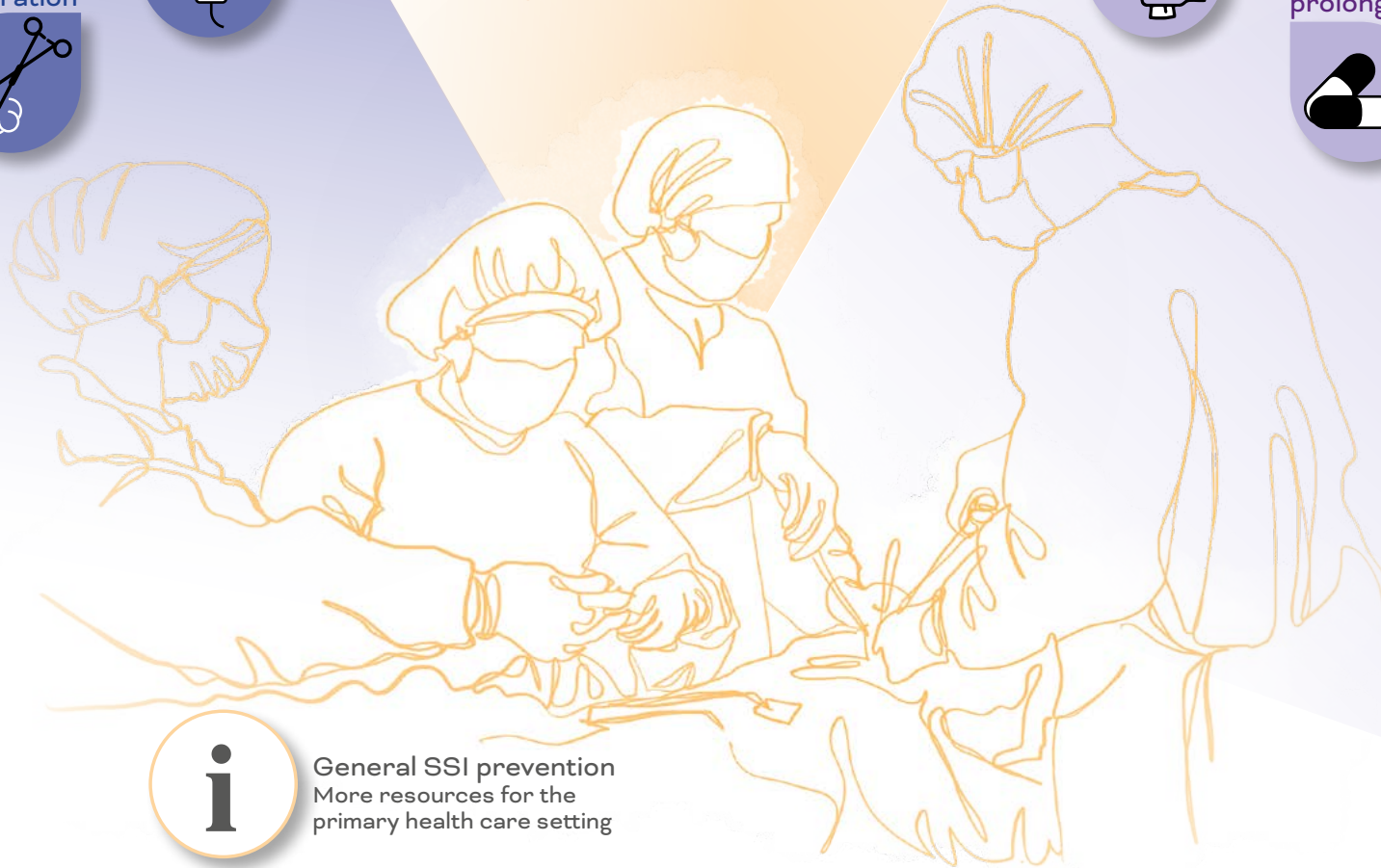
Decontamination
and reprocessing
of medical devices



Wound
dressings



General SSI prevention
More resources for the
primary health care setting





Preoperative bathing

[Overview](#)

Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: It is good clinical practice for patients to bathe or shower prior to surgery. The panel suggests that either plain soap or an antimicrobial soap may be used for this purpose. The panel decided not to formulate a recommendation on the use of CHG-impregnated cloths for the purpose of reducing SSI due to the very low quality of evidence.
IPC Training: Prevention of surgical site infection (SSI) – December 2018 update	Making improvements at local level. Powerpoint presentation, Trainer guide & Student handbook.
Additional training resources – Surgical site infections prevention key facts	Key facts on patient bathing and hair removal. Fact sheet.
Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice	See chapter 2.2.1. PREOPERATIVE BATHING



Hair removal

Overview

Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel recommends that in patients undergoing any surgical procedure, hair should either not be removed or, if absolutely necessary, it should be removed only with a clipper. Shaving is strongly discouraged at all times, whether preoperatively or in the operating room.
IPC Training: Prevention of surgical site infection (SSI) – December 2018 update	Making improvements at local level. Powerpoint presentation, Trainer guide & Student handbook.
Additional training resources – Surgical site infections prevention key facts	Key facts on patient bathing and hair removal. Fact sheet.
Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice	See chapter 2.2.3 HAIR REMOVAL



Surgical hand preparation (1/2)

[Overview](#)

Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel recommends that surgical hand preparation should be performed by scrubbing with either a suitable antimicrobial soap and water or using a suitable alcohol-based handrub before donning sterile gloves.
IPC Training: Prevention of surgical site infection (SSI) – December 2018 update	Making improvements at local level. Powerpoint presentation, Trainer guide & Student handbook.
Safe Hands in Surgery - A patient's journey	Training video. Overview to surgical hand hygiene.
WHO Surgical hand hygiene technique video	Training video. WHO Surgical hand hygiene technique video.
My 5 moments for hand hygiene in outpatient care: maternity (2012) - v1	Infographic – 5 moments explained – WHEN, WHY, examples
My 5 moments for hand hygiene in outpatient care: maternity (2012) - v2	Infographic – 5 moments explained – larger graphic
How to Handwash?	Infographic – detailed steps on how to handwash
How to Handrub?	Infographic – detailed steps on how to handrub
Surgical handrubbing technique	Infographic – detailed steps on how to perform surgical handrub



Resource name	Description
Guide to local production: WHO-recommended handrub formulations	This guide to local production of WHO-recommended handrub formulations is separated into two discrete but interrelated sections: Part A provides a practical guide for use at the pharmacy bench during the actual preparation of the formulation. Users may want to display the material on the wall of the production unit. Part B summarizes some essential background technical information and is taken from WHO Guidelines on Hand Hygiene in Health Care (2009) . Within Part B the user has access to important safety and cost information and supplementary material relating to dispensers and distribution.
Modified WHO formulations for surgical hand preparation	Straight forward sheet with two alcohol-based formulations
Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice	See chapter 2.2.5 SURGICAL HAND PREPARATION



Surgical site (skin) preparation

[Overview](#)

Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel recommends alcohol-based antiseptic solutions based on CHG for surgical site skin preparation in patients undergoing surgical procedures.
Additional training resources – Surgical site infections prevention key facts	Key facts on surgical site skin preparation. Fact sheet.
Training video - surgical site skin preparation	This educational video explains the process for patient skin preparation, which happens before any incision for a surgical procedure. This is critical for safe, quality health care and supports prevention of surgical site infections. This video contains real life footage to show step by step what is required and is aimed at health workers as an addition to other health care training sessions. Overall, the information is a key part of the infection prevention and control processes.



Preoperative surgical antibiotic prophylaxis (SAP)

Overview

Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel recommends that SAP (surgical antibiotic prophylaxis) should be administered prior to the surgical incision when indicated (depending on the type of operation). The panel recommends the administration of SAP within 120 minutes before incision, while considering the half-life of the antibiotic.
WHO Essential Medicines List	See chapter “Surgical prophylaxis”. This publication provides guidance on the choice of antibiotic, dose, route of administration and duration of treatment for common infectious syndromes in alignment with the recommendations for antibiotics included on the WHO Model List of Essential Medicines and Essential Medicines for Children and the WHO AWaRe (Access-Watch-Reserve) classification of antibiotics.
Handle antibiotics with care in surgery	Infographic – What should health care workers do and not do to prevent antimicrobial resistance (AMR) in surgery? Who should be involved in ensuring appropriate antibiotic use in surgery?



Drapes and gowns

[Overview](#)

Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel suggests that either sterile, disposable non-woven or sterile, reusable woven drapes and gowns can be used during surgical operations for the purpose of preventing SSI.
Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice	See chapter 2.3.2 DRAPES AND GOWNS



OR room discipline

Overview

Resource name	Description
Surgical Unit-based Safety Programme (SUSP) leaders' video	Part of the Surgical Unit-based Safety Programme (SUSP) in African hospitals
Surgical site infections infographic/door openings	Limit the number of people and doors being opened during surgery.



Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	See chapter 3.3 Importance of a clean environment in the operating room and decontamination of medical devices and surgical instruments
Environmental cleaning and infection prevention and control in health care facilities in low- and middle-income countries - Trainer's guide	Those who clean are the first line of defense against health care-associated infections (HAIs), and support efforts to reduce antimicrobial resistance (AMR). Strengthening the training of this important group can contribute to resolving many of today's public health challenges. This is important given that cleaning both surfaces and hands is vital to control the transmission of a number of HAIs. This two-part training package targets those who clean health care facilities. The Trainer's Guide takes the user through how to prepare, deliver and sustain an effective training for those who clean. The Modules and Resources provides instructions, definitions, photographs, posters and specific illustrations of recommended practices The package can be used by those who deliver environmental cleaning training programmes and/or those with a background in IPC including ministries of health, nongovernmental organizations, academic institutions, experts working in Quality of care, IPC and environmental cleaning/ Water, sanitation and Hygiene (WASH) and Health facility IPC focal points and onsite cleaning supervisors
Environmental cleaning and infection prevention and control in health care facilities in low- and middle-income countries - Modules and resources	Those who clean are the first line of defense against health care-associated infections (HAIs), and support efforts to reduce antimicrobial resistance (AMR). Strengthening the training of this important group can contribute to resolving many of today's public health challenges. This is important given that cleaning both surfaces and hands is vital to control the transmission of a number of HAIs. This two-part training package targets those who clean health care facilities. The Trainer's Guide takes the user through how to prepare, deliver and sustain an effective training for those who clean. The Modules and Resources provides instructions, definitions, photographs, posters and specific illustrations of recommended practices The package can be used by those who deliver environmental cleaning training programmes and/or those with a background in IPC including ministries of health, nongovernmental organizations, academic institutions, experts working in Quality of care, IPC and environmental cleaning/ Water, sanitation and Hygiene (WASH) and Health facility IPC focal points and onsite cleaning supervisors



Environmental cleaning (2/2)

Overview

Resource name	Description
Best Practices for Environmental Cleaning in Healthcare Facilities in Resource-Limited Settings (from CDC + ICAN)	Link to website with additional resources. The document provides guidance on best practices for environmental cleaning procedures and programs in healthcare facilities in resource-limited settings. It was developed as a collaboration between the Centers for Disease Control and Prevention (CDC) and the Infection Control Africa Network (ICAN).
OpenWHO module: Standard precautions: Environmental cleaning and disinfection	Teleclass module (audio + slides). In this course, you will learn the role of an IPC professional in environmental cleaning and understand how cleaning and disinfection prevents contamination of the health care environment.
Aide-memoire: environmental cleaning, waste and linen management	Actions to ensure reliable improvements in infection prevention and control (IPC) practices. In: Infection prevention and control: guidance to action tools
TECHNICAL FACT SHEET 6: Environmental Cleaning	Fact sheet. Environmental cleaning considerations within the Water and Sanitation for Health Facility Improvement Tool (WASH FIT) cycle
TEACH CLEAN (from London School of Hygiene & Tropical Medicine)	In 2023, the TEACH CLEAN package, was used as the basis for the development of a WHO Trainer's Guide and the Modules and Resources for the document Environmental cleaning and infection prevention and control in health care facilities in low- and middle-income countries. Helps address a lack of formal training for those who clean and promotes IPC and WASH standards for a safer environment.



Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel recommends against the prolongation of SAP after completion of the operation for the purpose of preventing SSI. Recommendation: The panel suggests that preoperative antibiotic prophylaxis should not be continued in the presence of a wound drain for the purpose of preventing SSI.
WHO Essential Medicines List	See chapter “Surgical prophylaxis”. This publication provides guidance on the choice of antibiotic, dose, route of administration and duration of treatment for common infectious syndromes in alignment with the recommendations for antibiotics included on the WHO Model List of Essential Medicines and Essential Medicines for Children and the WHO AWaRe (Access-Watch-Reserve) classification of antibiotics.
Handle antibiotics with care in surgery	Infographic – What should health care workers do and not do to prevent antimicrobial resistance (AMR) in surgery? Who should be involved in ensuring appropriate antibiotic use in surgery?
OpenWHO module: AMR	Teleclass module (audio + slides). Antimicrobial resistance and infection prevention and control in general. In this course, you will learn about what AMR is and how resistant infections occur, which pathogens cause the biggest problems globally and in the health care setting, the risk factors and causes of AMR and, most importantly, the role of IPC in reducing AMR. You will learn about strategies to reduce and prevent the occurrence of antibiotic resistance. These strategies include infection prevention and control (IPC), such as observing proper hand hygiene and environmental cleaning; triaging and isolating/cohorting patients with infections that are antibiotic-resistant; practicing antimicrobial stewardship; and conducting surveillance. You will also learn about how to use the World Health Organization's (WHO) multimodal strategies to implement activities to reduce and prevent AMR.



Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	See chapter 3.3 Importance of a clean environment in the operating room and decontamination of medical devices and surgical instruments
Decontamination and reprocessing of medical devices for health care facilities	Manual - Following recent threats caused by widespread epidemics and increasing awareness about the spread of antimicrobial resistance, several countries are paying more attention and investing resources to strengthening IPC infrastructures and improving practices. In this context, this manual is a very important instrument to provide guidance to health managers and health workers on required infrastructures and standard procedures for effective sterilization, and decontamination reprocessing of medical devices. This edition of the manual represents a thorough revision and update of the Sterilization Manual for Health Centers issued by the Pan American Health Organization in 2009 and it is the result of a close collaboration between the IPC Global Unit at the Headquarters of the World Health Organization, the Pan American Health Organization, and a group on international experts.
Decontamination and reprocessing of medical devices for health care facilities: aide-memoire	Aide-memoire - Decontamination of medical devices plays an important role in the prevention of health care-associated infections. It includes cleaning, disinfection and/or sterilization. The processes involved in decontamination are complex, require specific infrastructure and equipment, and involve several sequential steps that need to be performed correctly – from device collection and receipt by the decontamination unit to processing, storage and distribution throughout the facility. Quality control procedures (such as validation) at each step of the decontamination process are of the utmost importance to ensure the correct functioning of the equipment and processes. This aide-memoire presents a concise overview of important advice and key elements at a glance.
OpenWHO module: Decontamination and sterilization of medical devices	Teleclass module (audio + slides). The processes of sterilization and decontamination are complex, requiring specific infrastructure, equipment and process. In this course, which is divided into two parts, you will learn about the overall procedure for managing decontamination and sterilization of medical devices.
Guideline for disinfection and sterilization in healthcare facilities (2019) from CDC	The Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 (last update 2019), presents evidence-based recommendations on the preferred methods for cleaning, disinfection and sterilization of patientcare medical devices and for cleaning and disinfecting the healthcare environment. Because maximum effectiveness from disinfection and sterilization results from first cleaning and removing organic and inorganic materials, this document also reviews cleaning methods.



Resource name	Description
Global guidelines for the prevention of surgical site infection, 2nd ed.	Recommendation: The panel suggests not using any type of advanced dressing over a standard dressing on primarily closed surgical wounds for the purpose of preventing SSI. Dressings used on primarily closed surgical wounds should be sterile and should be applied with an aseptic technique.
Training video - surgical wound evaluation and dressing change	This educational video explains the process for wound evaluation and dressings management, which will happen after a surgical procedure. This is critical for safe, quality health care and supports prevention of surgical site infections. This video contains real life footage to show step by step what is required and is aimed at health workers as an addition to other health care training sessions. Overall, the information is a key part of the infection prevention and control processes.
My 5 Moments for Hand Hygiene: Focus on caring for a patient with a post-operative wound	Infographic – 5 moments explained + key additional considerations for post-operative wounds



Resource name	Description
WHO integrated health services – infection prevention control – prevention of surgical site infections - Website	Official WHO website with a plethora of resources on the topic of preventing surgical site infections.
Global guidelines for the prevention of surgical site infection, 2nd ed.	These WHO guidelines which were updated in 2018, are valid for any country and suitable to local adaptations, and take account of the strength of available scientific evidence, the cost and resource implications, and patient values and preferences.
Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice	The manual is aimed at all those concerned by the prevention of SSI. A multidisciplinary team is necessary to successfully implement preventive measures. This should include at least IPC and associated staff, such as those working in epidemiology, decontamination/ sterilization, quality improvement and patient safety, hospital administration, and the surgical teams (including surgeons, anaesthesiologists, and perioperative nurses). Part 1 aims to provide a brief outline of the work needed to ensure that the entire facility is ready to undertake the intervention/change required. Part 2 then aims to present practical implementation steps and examples all related to the different interventions in the WHO recommendations, including an approach to improvement.
Resource considerations for investing in hand hygiene improvement in health care facilities	The focus of this document is on the resource considerations for investing in hand hygiene improvement in health care (primary, secondary and tertiary) using the MMIS approach. It presents the inputs (such as equipment, supplies and activities) required to: estimate the investments needed to implement and sustain a comprehensive hand hygiene programme based on the MMIS; and support health workers to perform hand hygiene at the point of care and at other important times for safe, high-quality care.
Operational Framework for Primary Health Care	World Health Organization & United Nations Children's Fund (UNICEF). (2020). Operational framework for primary health care: transforming vision into action. World Health Organization



Resource name	Description
Hand hygiene in outpatient and home-based care and long-term care facilities: a guide to the application of the WHO multimodal hand hygiene improvement strategy and the “My Five Moments For Hand Hygiene” approach	The scope of this document is to address practical aspects related to the performance of routine hand hygiene while providing outpatient care. This document does not address surgical hand preparation (please refer to the WHO Guidelines on Hand Hygiene in Health Care). The document is divided into two main sections: 1) a conceptual part aimed at providing the background evidence and the theoretical principles related to the “My five moments for hand hygiene” approach and the WHO Multimodal Hand Hygiene Improvement Strategy, with adaptation to the reality of outpatient care settings; 2) a practical part with examples of the application of hand hygiene principles in situations occurring frequently in outpatient care settings. These practical examples are provided to help the reader to understand the need for hand hygiene in daily practice and to progressively adopt this approach during health-care delivery in real life situations. Infection control leaders at the national level and professionals at the facility level should facilitate the understanding and the adoption of these concepts by front-line health-care workers (HCWs). This includes estimating risks, establishing priorities and taking into account the available resources and most frequent procedures undertaken locally. Additional practical tools for evaluation, education, and learning targeted at health-care providers in outpatient care settings are currently under development by WHO and should be used in association with this guidance document.
Preventing surgical site infections: implementation approaches for evidence-based recommendations	The purpose of this document is to present a range of tested approaches to achieve successful SSI prevention implementation at the facility level, including in the context of a broader surgical safety climate. Section I of this document describes the pathway of and lessons learned from the development and implementation of the WHO Surgical Safety Checklist on a global scale. On a global scale this is a milestone example of improving safety in surgery, including through SSI prevention, while considering principles related to implementation and dissemination. Section II moves to outlining improvement intervention examples to decrease SSI. The first part describes the key evidence- and practice-based elements identified from scientific publications as being successful in improving processes and practices that contribute to the successful prevention of SSI in a range of countries. Ultimately, it aims to stimulate reflection and action at the local level and highlights the importance of a multifaceted approach. The second part of this section describes a project conducted in four African countries (Surgical Unit-based Safety Program [SUSPAfrica]) using a multimodal intervention combining both adaptive and technical approaches.



Resource name	Description
Infection prevention and control in primary care: a toolkit of resources	The recently published World Health Organization (WHO) Strengthening infection prevention and control in primary care document collates existing standards, measurement and implementation approaches, and resources for infection prevention and control (IPC) in primary care. During its development, it became apparent that a number of already existing tools and resources have the potential to support facility-level implementation of IPC in primary care. This toolkit brings together in one place a number of these tools and resources from WHO and other organizations, with a focus on those most relevant to primary care. These tools and resources have been compiled to support facility-level implementation in line with the recommended WHO IPC Hub and Task Force multimodal approach.
OpenWHO module: Surgical site infections	Teleclass module (audio + slides). This course will cover global SSI rates and burden, risk factors for SSI, prevention measures you can take to reduce SSI, and adaptive and technical approaches to improving and applying the WHO multimodal strategy. If you have not yet taken the WHO Core Components and Multimodal Strategies module, we recommend taking it before proceeding with this module.
The Surgical Unit-based Safety Programme (SUSP) in African hospitals	To make progress in reducing SSIs, surgical and infection prevention and control teams in five hospitals in Kenya, Uganda, Zambia and Zimbabwe implemented the Surgical Unit-based Safety Programme (SUSP) from July 2013 to December 2015. Supported by WHO and the Johns Hopkins Armstrong Institute for Patient Safety and Quality (Baltimore, USA), these teams implemented a multimodal intervention consisting of implementing or strengthening multiple SSI prevention measures combined with an adaptive approach (the Comprehensive Unit-based Safety Program) aimed at facilitating the adoption of these measures and the promotion of a wider patient safety culture.
Key facts on decolonization of nasal carriers of Staphylococcus aureus	Key facts on decolonization of nasal carriers of Staphylococcus aureus. Fact sheet.
Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice	See chapter 2.2.2 DECOLONIZATION



General SSI prevention

More resources for the primary health care setting (4/5)

[Overview](#)

Resource name	Description
Preoperative period poster	Poster on SSI prevention recommendations – PREoperative period
Intraoperative period poster	Poster on SSI prevention recommendations – INTRAoperative period
Postoperative period poster	Poster on SSI prevention recommendations – POSToperative period
Do the right thing at the right time to stop surgical site infections - infographic	Infographic on SSI prevention recommendations – including all operative periods
Perioperative staff safety assessment (from AHRQ)	The Comprehensive Unit-based Safety Program employs the Staff Safety assessment, often called the two-question survey. The Safety Program for Surgery has modified that tool for the surgical setting into the Perioperative Staff Safety Assessment (PSSA). The PSSA helps you access this wisdom by directly asking providers: How will the next patient be harmed in your unit? What do you think can be done to prevent this harm? How will the next patient develop a surgical site infection on your unit? What do you think can be done to prevent this surgical site infection?
Learn From Defects Tool—Perioperative Setting (from AHRQ)	This tool helps you with second-order problem solving. Specifically, it helps your team organize ideas about how a defect happened, think about problems and solutions at a systems level, and follow up with evaluation plans to ensure your solutions worked.
Protocol for surgical site infection SURVEILLANCE with a focus on settings with limited resources	SSI surveillance
Surgical site infection surveillance peri-operative data collection form	SSI surveillance
Surgical site infection surveillance post-operative data collection form	SSI surveillance
My 5 Moments for Hand Hygiene observation form	HH surveillance



Resource name	Description
WHO guidelines on hand hygiene in health care (2009)	The WHO Guidelines on Hand Hygiene in Health Care provide health-care workers (HCWs), hospital administrators and health authorities with a thorough review of evidence on hand hygiene in health care and specific recommendations to improve practices and reduce transmission of pathogenic microorganisms to patients and HCWs. The present Guidelines are intended to be implemented in any situation in which health care is delivered either to a patient or to a specific group in a population. Therefore, this concept applies to all settings where health care is permanently or occasionally performed, such as home care by birth attendants.
Hand Hygiene Training Tools	Official WHO website with a plethora of resources on the topic of hand hygiene.
Glove use information leaflet (2009)	Comprehensive information leaflet on glove use
WASH in health care facilities: Practical steps to achieve universal access to quality care (2019)	The purpose of this document is to present eight practical actions that Member States can take at the national and sub-national level to improve WASH in health care facilities. It also summarizes the global response to the UN Secretary General's Call to Action. This document is a companion to the WHO and UNICEF JMP 2019 SDG baseline report for WASH in health care facilities, which provides the first national, regional and global baseline estimates for monitoring SDG 6 in health care facilities. The main audiences for this document are national health policy makers, district health managers, professionals leading quality initiatives, and health facility administrators and staff. Additional audiences include global WASH and health partners, national water and sanitation policy-makers, practitioners, researchers, and civil society.



Resource name	Description
WASH FIT: A practical guide for improving quality of care through water, sanitation and hygiene in health care facilities, 2nd ed.	WASH FIT is a risk-based, quality improvement tool for health care facilities, covering key aspects of WASH services: water; sanitation; hand hygiene; environmental cleaning; health care waste management; and selected aspects of energy, building and facility management. The first edition of WASH FIT was published in 2018 and as of 2022 is in use in over 40 countries. This second edition responds to member state and user requests for more guidance and information on incorporating climate and environment and gender and equity considerations throughout each of the 5 WASH FIT steps as well as a greater focus on sustainable, implementation and engagement with health actors. The approach and WASH standards are the same as those included in the first edition of WASH FIT and thus those already implementing WASH FIT can use the new package to improve existing efforts. The Second Edition also includes a set of fact sheets, check lists, updated assessments and examples of national adoption and use of WASH FIT. The guide is accompanied by a comprehensive training manual and set of training slides. The 1st edition of WASH FIT can be found here.
WASH FIT manual for trainers	This manual for trainers outlines the information and materials required to undertake training in line with the WASH FIT Guide, including background documents, the content of the recommended training modules and training evaluation approaches. The modular approach outlined enables trainers to decide on all topics that are most useful to support the delivery of targeted training at the local level. It also provides sample training schedules, evaluation forms and is linked to a full set of interactive, adult-learning focused, training slides.
Additional WASH FIT resources	Official WASH FIT website with a plethora of resources on the topic of WASH FIT (the Water and Sanitation for Health Facility Improvement Tool), a risk-based management tool for health care facilities, covering key aspects of water, sanitation, hand hygiene, environmental cleaning, health care waste management and selected aspects of energy, building and facility management.



Resource name	Description
Standard precautions for the prevention and control of infections: aide-memoire (2022)	Standard precautions aim to protect both health workers and patients by reducing the risk of transmission of microorganisms from both recognized and unrecognized sources. They are the minimum standard of infection prevention and control practices that should be used by all health-care workers, during the care of all patients, at all times, in all settings. When applied consistently, standard precautions can prevent the transmission of microorganisms between patients, health workers and the environment. This aide-memoire presents a concise overview of important advice for implementation and key elements at a glance.
OpenWHO module: Standard precautions: The role of personal protective equipment	Teleclass module (audio + slides). When used correctly, PPE provides a physical barrier that protects your eyes, nose, mouth, skin, and clothing. Safely putting on, using, and removing PPE during healthcare activities relies on human decision-making and performance; therefore, it is essential to recognize risk of potential exposures and be sure PPE is used correctly and appropriately.
OpenWHO module: Standard precautions: Waste management	Teleclass module (audio + slides). In this course, you will learn about the different categories of waste and the process for waste management. Health care waste includes all waste generated by health, research and laboratory facilities in the course of providing health care services. Health care waste in a facility should be managed from point of generation to final disposal and removal.
Transmission-based precautions for the prevention and control of infections: aide-memoire	Transmission-based precautions are used in addition to standard precautions for patients with known or suspected infection or colonization with transmissible and/or epidemiologically significant pathogens. The type of transmission-based precautions assigned to a patient depends on the transmission route of the microorganism: contact, droplet, or airborne. This aide-memoire presents a concise overview of important advice for implementation and key elements at a glance.
Maternal Health Unit	The Maternal Health Unit (MAH) provides leadership for improving maternal and perinatal health and well-being and ending preventable maternal mortality. MAH generates programmatic-focused evidence, develops guidelines, norms and standards, and supports regions and countries in adaptation, implementation and monitoring of person-centered quality and respectful maternal and perinatal care through advocacy, partnerships, policy dialogue and capacity building.



Resource name	Description
Midwifery education and care	Strengthening midwifery education to international standards is a key step to improving quality of care and reducing maternal and newborn mortality and morbidity. The Framework for Action to Strengthen Midwifery Education is a guide to develop high-quality, sustainable pre- and in-service education to save lives. It has been developed by WHO, UNFPA, UNICEF and ICM and includes a seven-step action plan for use by all stakeholders in maternal and newborn health.
Essential Childbirth Care Course Module 1. Introduction - Facilitator's Guide	The Essential Childbirth Care Course (ECBC) is focused on the midwifery model of care, which puts women, newborns and their families at the center, ensures continuity of care, and prevents unnecessary interventions, yet ensures lifesaving actions. The ECBC provides innovative, fun, and challenging in-service adult education for the care of healthy women, and their healthy newborns, but is also available as an addition to pre-service education. It supports life-long learning in compassionate midwifery care in all settings, everywhere. The goal of this guide is to support facilitators to enable learners to implement WHO recommendations and tools for evidence-based midwifery care for women and their newborns during labour, childbirth and the immediate postnatal period.
Surgical care at the district hospital	Surgical Care at the District Hospital is a practical resource for individual practitioners and for use in undergraduate and postgraduate programmes, in-service training and continuing medical education programmes. The manual is designed to promote quality surgical care at district (first-referral) level hospitals for patients who cannot be safely transferred to a secondary or tertiary-level hospital. It covers critical aspects of paediatric surgical care, such as fundamentals of surgical practice for the paediatric patient, management of emergencies and paediatric anaesthesia.