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NEW PERSPECTIVES ON INFECTION PREVENTION AND CONTROL PROGRAM ASSESSMENTS IN THE SPIRIT OF IMPROVEMENT
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Sponsored by WHO Infection Prevention and Control Global Unit
www.webbertraining.com
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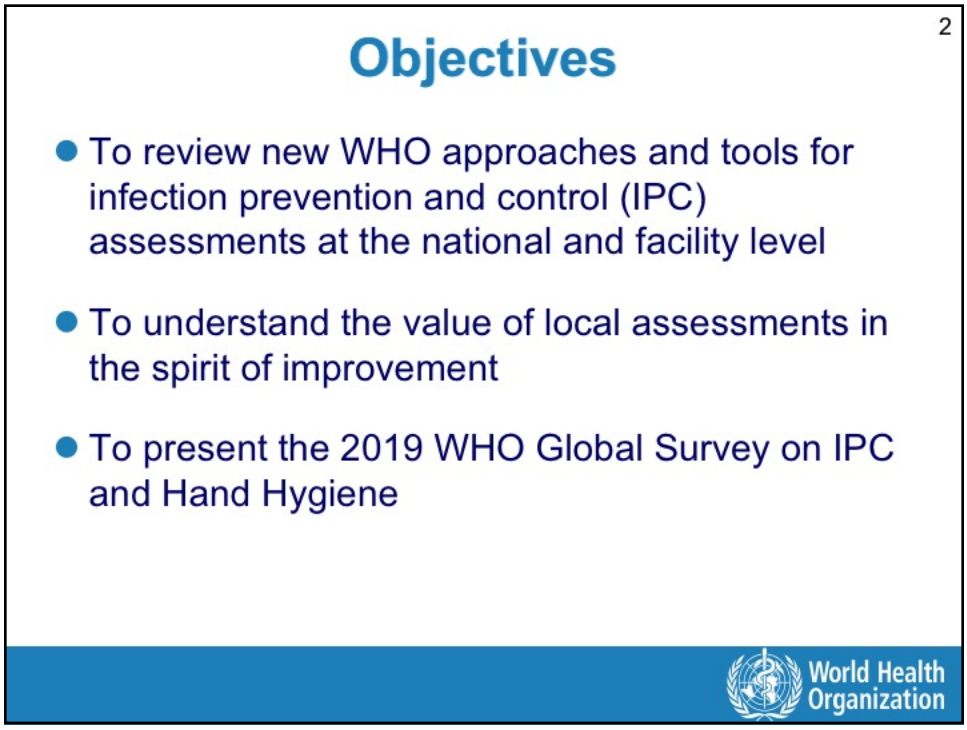
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Objectives
To review new WHO approaches and tools for infection prevention and control (IPC) assessments at the national and facility level
To understand the value of local assessments in the spirit of improvement
To present the 2019 WHO Global Survey on IPC and Hand Hygiene
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Role of infection prevention and control (IPC) to achieve SDGs and WHO's priorities

- **Achieving UHC (1st strategic priority & SDG 3.8),** as quality is an essential component of UHC. **IPC** is a **practical and evidence-based approach** with demonstrated **impact on quality of care** and patient safety across all levels of the health system.
- **Combating AMR (3rd strategic priority & resolution WHA A68/20),** as IPC has a critical role to reduce both the spread of antibiotic resistant organisms and the occurrence of infection and thus, the need for antibiotic use with ultimate impact on AMR emergence.
- **Maternal and neonatal health (3rd strategic priority, SDG 3.2 & resolution A70/13 on sepsis),** given that sepsis is a major cause of morbidity and mortality (including health care-associated) in these fragile populations.
- **Prevention of health emergencies including fulfilment of the international health regulations (2nd strategic priority & SDG 3.d),** as the existence of strong IPC programmes and capacity constitutes the foundation for adequate preparedness and response to outbreaks.
- **Water, sanitation and hygiene (WASH) (SDG 6, AMR GAP strategic objective 3, and UN Secretary General global call),** because IPC and WASH are naturally complementary; WASH provide the necessary and adequate infrastructures, materials and equipment enabling the implementation of appropriate IPC practices and behavioural change among health care workers and the community.

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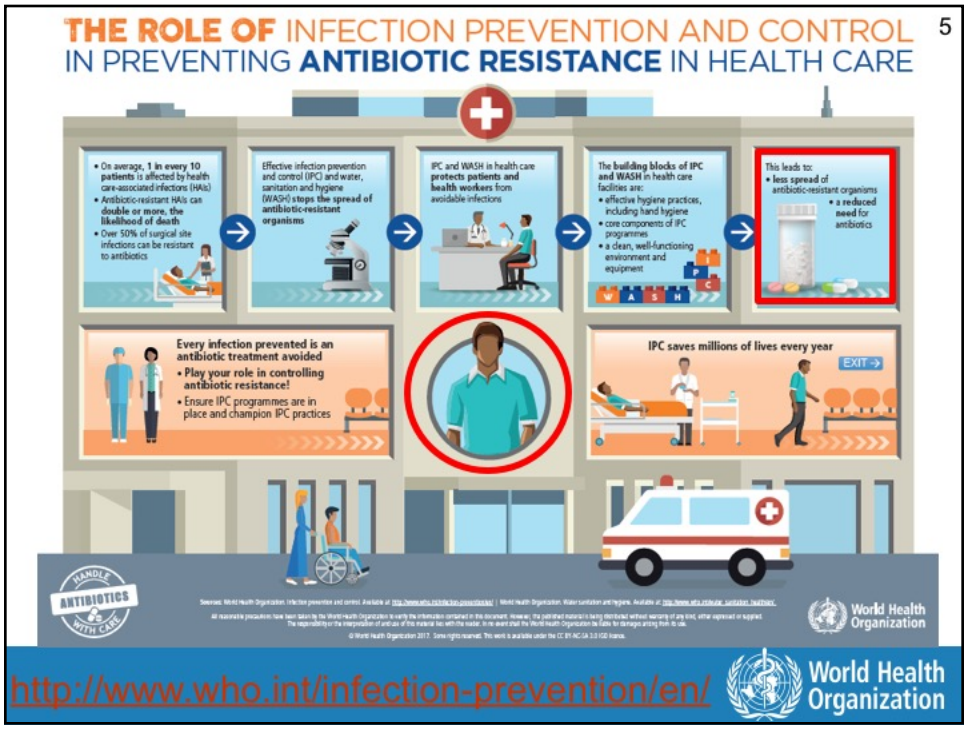
THE ROLE OF INFECTION PREVENTION AND CONTROL IN PREVENTING ANTIBIOTIC RESISTANCE IN HEALTH CARE
5
On average, 1 in every 10 patients is affected by health care-associated infections (HAIs)
Antibiotic-resistant HAIs can double or more, the likelihood of death
Over 50% of surgical site infections can be resistant to antibiotics
Effective infection prevention and control (IPC) and water, sanitation and hygiene (WASH) stops the spread of antibiotic-resistant organisms
IPC and WASH in health care protects patients and health workers from avoidable infections
The building blocks of IPC and WASH in health care facilities are:
effective hygiene practices, including hand hygiene
core components of IPC programmes
a clean, well-functioning environment and equipment
This leads to:
less spread of antibiotic-resistant organisms
a reduced need for antibiotics
Every infection prevented is an antibiotic treatment avoided
Play your role in controlling antibiotic resistance!
Ensure IPC programmes are in place and champion IPC practices
IPC saves millions of lives every year
EXIT
HANDLE ANTIBIOTICS WITH CARE
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http://www.who.int/infection-prevention/en/
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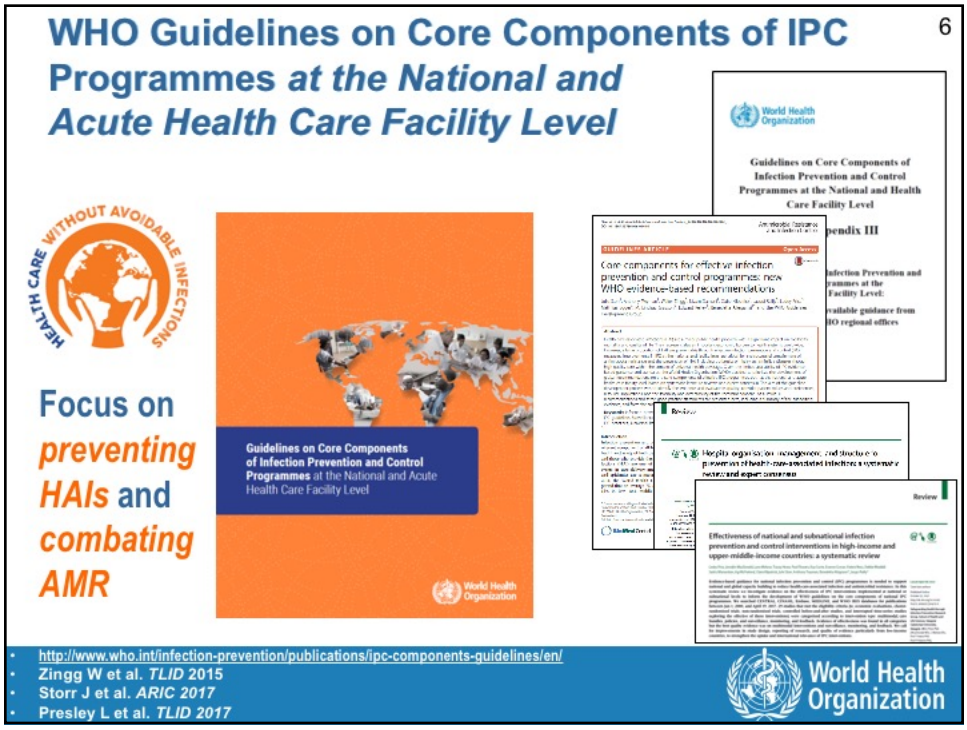
WHO Guidelines on Core Components of IPC Programmes at the National and Acute Health Care Facility Level
6
HEALTH CARE WITHOUT AVOIDABLE INFECTIONS
Focus on preventing HAIs and combating AMR
Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level
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Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Health Care Facility Level
Core components for effective infection prevention and control programmes: new WHO evidence-based recommendations
Effectiveness of national and subnational infection prevention and control interventions in high-income and upper-middle-income countries: a systematic review
http://www.who.int/infection-prevention/publications/ipc-components-guidelines/en/
Zingg W et al. TLID 2015
Storr J et al. ARIC 2017
Presley L et al. TLID 2017
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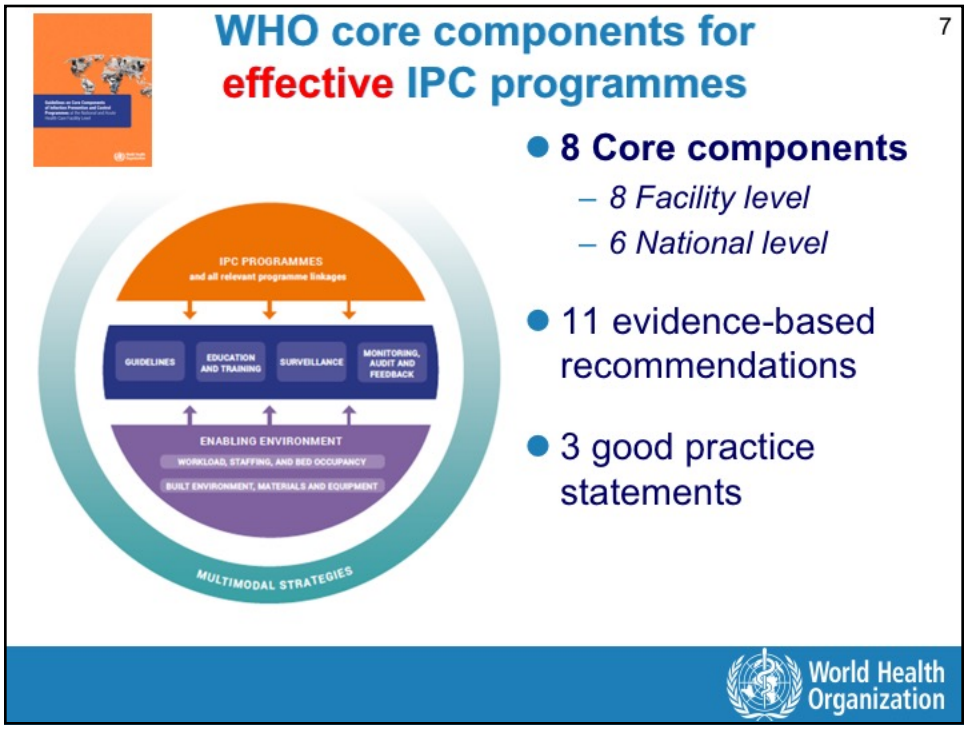
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WHO core components for effective IPC programmes
8 Core components
– 8 Facility level
– 6 National level
11 evidence-based recommendations
3 good practice statements
IPC PROGRAMMES and all relevant programme linkages
GUIDELINES
EDUCATION AND TRAINING
SURVEILLANCE
MONITORING, AUDIT AND FEEDBACK
ENABLING ENVIRONMENT
WORKLOAD, STAFFING, AND BED OCCUPANCY
BUILT ENVIRONMENT, MATERIALS AND EQUIPMENT
MULTIMODAL STRATEGIES
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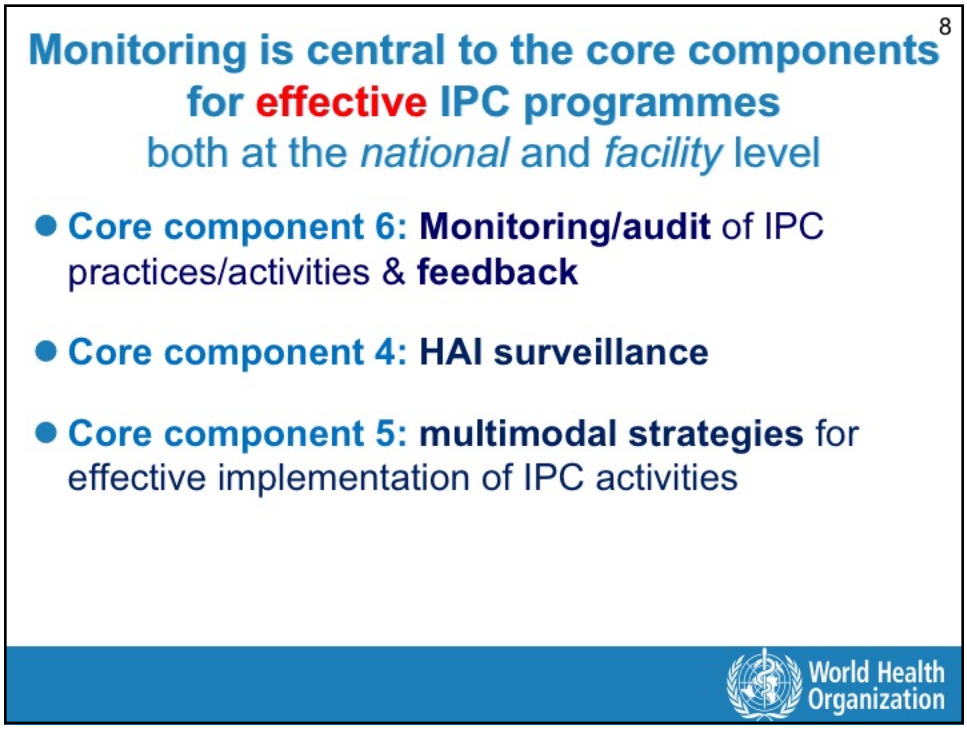
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Monitoring is central to the core components for effective IPC programmes
both at the national and facility level
Core component 6: Monitoring/audit of IPC practices/activities & feedback
Core component 4: HAI surveillance
Core component 5: multimodal strategies for effective implementation of IPC activities
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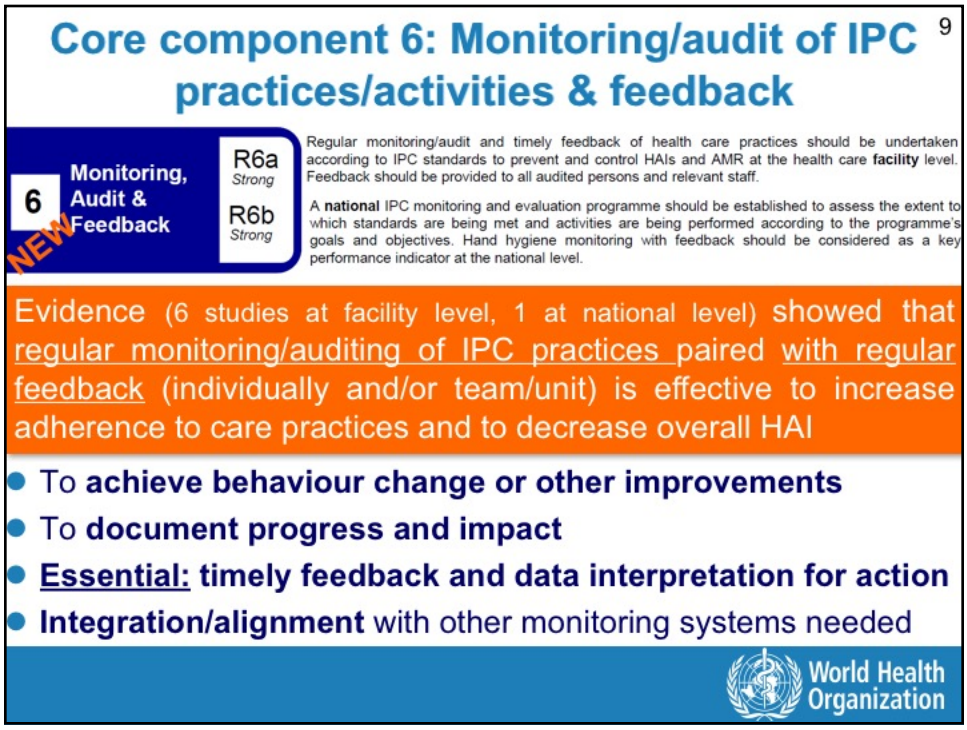
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Core component 6: Monitoring/audit of IPC practices/activities & feedback
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Monitoring, Audit & Feedback
NEW
R6a Strong
R6b Strong
Regular monitoring/audit and timely feedback of health care practices should be undertaken according to IPC standards to prevent and control HAIs and AMR at the health care facility level. Feedback should be provided to all audited persons and relevant staff.
A national IPC monitoring and evaluation programme should be established to assess the extent to which standards are being met and activities are being performed according to the programme's goals and objectives. Hand hygiene monitoring with feedback should be considered as a key performance indicator at the national level.
Evidence (6 studies at facility level, 1 at national level) showed that regular monitoring/auditing of IPC practices paired with regular feedback (individually and/or team/unit) is effective to increase adherence to care practices and to decrease overall HAI
To achieve behaviour change or other improvements
To document progress and impact
Essential: timely feedback and data interpretation for action
Integration/alignment with other monitoring systems needed
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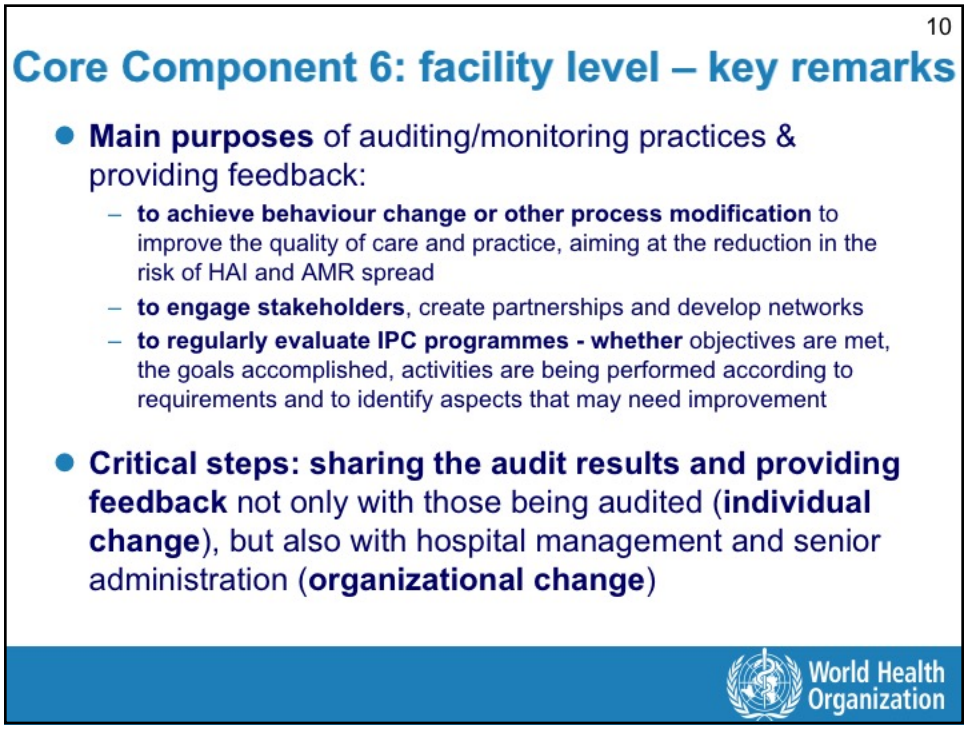
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Core Component 6: facility level – key remarks
Main purposes of auditing/monitoring practices & providing feedback:
to achieve behaviour change or other process modification to improve the quality of care and practice, aiming at the reduction in the risk of HAI and AMR spread
to engage stakeholders, create partnerships and develop networks
to regularly evaluate IPC programmes - whether objectives are met, the goals accomplished, activities are being performed according to requirements and to identify aspects that may need improvement
Critical steps: sharing the audit results and providing feedback not only with those being audited (individual change), but also with hospital management and senior administration (organizational change)
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Core Component 6: National level – key remarks

- **Systematic method to document the progress and impact of national programmes** in terms of defined indicators, e.g. tracking hand hygiene improvement as a key performance indicator, including hand hygiene compliance monitoring ***- strong recommendation***
- National level monitoring and evaluation should have in place mechanisms that:
  - Provide **regular reports** on the state of the national goals (outcomes and processes) and strategies
  - Regularly monitor and evaluate the **WASH services, IPC activities and structure** of the health care facilities through audits or other officially recognized means
  - Promote the evaluation of the performance of local IPC programmes in a non- punitive institutional culture

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Food and Agriculture Organization of the United Nations

WORLD ORGANISATION FOR ANIMAL HEALTH

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Global Monitoring of Country Progress on Antimicrobial Resistance (AMR): Country self-assessment questionnaire (version two)

Version 2.0, 9 October 2017

8.1 Infection Prevention and Control (IPC) in human health care		
O	A	No national IPC programme or operational plan is available.
O	B	A national IPC programme or operational plan is available. National IPC and water, sanitation and hygiene (WASH) and environmental health standards exist but are not fully implemented.
O	C	A national IPC programme and operational plan are available and national guidelines for health care IPC are available and disseminated. Selected health facilities are implementing the guidelines, with monitoring and feedback in place.
O	D	National IPC programme available according to the WHO IPC core components guidelines[6] and IPC plans and guidelines implemented nationwide. All health care facilities have a functional built environment (including water and sanitation), and necessary materials and equipment to perform IPC, per national standards.
O	E	IPC programmes are in place and functioning at national and health facility levels according to the WHO IPC core components guidelines[7]. Compliance and effectiveness are regularly evaluated and published. Plans and guidance are updated in response to monitoring.

Estimated national coverage with critical measures (water supplies, hygiene and immunization) to reduce spread of infections in communities and health care facilities.	Latest national coverage rate (in %)	Year
Immunisation coverage rate of pneumococcus vaccine.		
Immunisation coverage rate of Haemophilus influenzae type b (Hib) vaccine.		
Proportion of health care facilities with basic[8] water supplies.		
Proportion of health care facilities with basic[10] hand hygiene facilities.		
Proportion of health care facilities with functional sanitation facilities		

https://www.who.int/antimicrobial-resistance/global-action-plan/AMR-self-assessment-country-questionnaire-2017-English.pdf?ua=1

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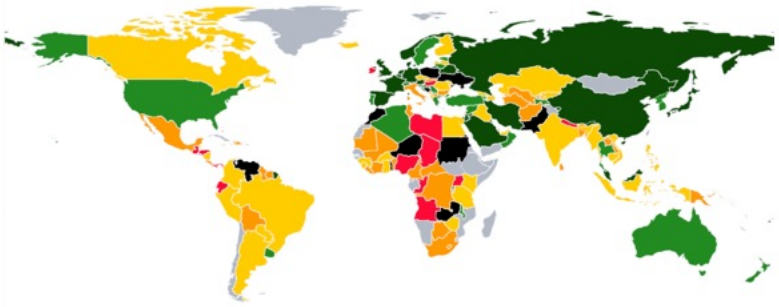
AMR survey 2017



- **58.4%:** national IPC programme or operational plan and national IPC guidelines
- **14.9%:** compliance and effectiveness evaluated and reported

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TECHNICAL FRAMEWORK IN SUPPORT TO IHR (2005) MONITORING AND EVALUATION

JOINT EXTERNAL EVALUATION TOOL

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SECOND EDITION - January 2018

INTERNATIONAL HEALTH REGULATIONS (2005)

	P.3.3 Infection prevention and control[14]
No capacity - 1	No systematic efforts, national programme, or responsible persons for infection prevention and control in human health care facilities/to promote infection prevention and prevent transmission of resistant bacteria in the animal food production sector
Limited capacity - 2	National water, sanitation and hygiene (WASH) and environmental health standards exist but are not fully implemented National policy and plan are available for infection prevention and control (IPC) in animal health care through improving biosecurity[1], animal vaccination and animal husbandry
Developed capacity - 3	National guidelines for IPC in animal production are available and disseminated Selected health care facilities/farms are implementing the guidelines, with monitoring and feedback in place All referral hospitals have WASH facilities that are functional, in line with national standards
Demonstrated capacity - 4	Nationwide implementation of IPC plans and guidelines in public and private sectors All health care facilities have a suitable functional environment (including water and sanitation facilities), and necessary materials and equipment to perform IPC per national standards
Sustainable capacity – 5	PC is in place and functioning at national and health facility levels Infection prevention effectiveness is regularly evaluated, with results published Plans and guidance are updated in response to monitoring

https://extranet.who.int/sph/sites/default/files/document-library/document/9789241550222-eng.pdf

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Core component 4: HAI surveillance

4 Surveillance — R4a *Strong*, R4b *Strong*

Facility-based HAI surveillance should be performed to guide IPC interventions and detect outbreaks, including AMR surveillance with timely feedback of results to health care workers and stakeholders and through national networks.

National HAI surveillance programmes and networks that include mechanisms for timely data feedback and with the potential to be used for benchmarking purposes should be established to reduce HAI and AMR.

Evidence (13 studies at facility level, 1 at national level) shows that HAI surveillance leads to a decrease in HAI (including central line-associated bloodstream infections, ventilator-associated pneumonia, SSI, catheter-related urinary tract infections and catheter-related bloodstream infections), and that timely feedback of results is influential in the implementation of effective IPC actions

- **Budget, leadership support and linkages to other surveillances and health information systems** needed
- **Standardized definitions, appropriate methods, good quality laboratory support, quality control** needed

Training and expertise needed

Timely reporting and **use of data** to plan IPC are crucial

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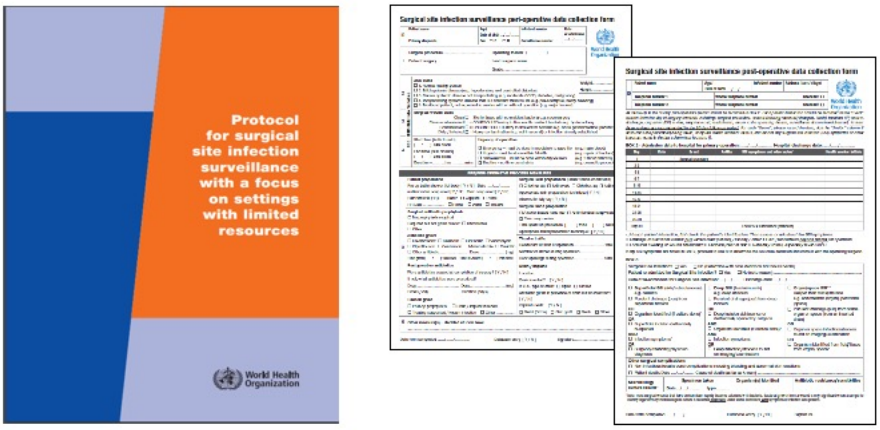
New protocol for surgical site infection surveillance based on SUSP testing



http://www.who.int/infection-prevention/tools/surgical/SSI-surveillance-protocol.pdf?ua=1

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The implementation approach

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Core component 5: Multimodal strategies

5 Multimodal Strategies NEW

R5a *Strong*

R5b *Strong*

At the **facility** level IPC activities should be implemented using multimodal strategies to improve practices and reduce HAI and AMR.

National IPC programmes should coordinate and facilitate the implementation of IPC activities through multimodal strategies on a nationwide or sub-national level.

Evidence (44 studies at facility, 14 at national level) shows that implementing IPC activities at facility level using multimodal strategies is effective to improve IPC practices and reduce HAI (particularly hand hygiene compliance, central line-associated bloodstream infections, ventilator-associated pneumonia, infections caused by MRSA and *C. difficile*)

A **multimodal strategy** comprises **several elements or components** (3 or more; usually 5) **implemented in an integrated way** with the aim of improving an outcome and changing behaviour. It includes tools, such as bundles and checklists, developed by multidisciplinary teams that **take into account local conditions**.

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What is a multimodal strategy?

- It is **"THE" way** to achieve the system change, climate and behaviour that supports IPC progress and, ultimately, the measurable impact that benefits patients and health care workers.
- **Multimodal thinking** means that practitioners implementing IPC do not focus only on single strategies to change practices (for example, training and education), but consider a range of strategies that target different influencers of human behaviour, e.g. procurement, monitoring and feedback, infrastructures or organizational culture.
- All (five) areas should be considered and necessary action taken, based on the local context and situation informed by periodic assessments.
- Lessons from the field suggest that targeting only one of these five elements (using a "unimodal" strategy) is more likely to result in improvements that are short-lived and not sustainable.

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IPC multimodal improvement strategy: multimodal thinking

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The Five Components of the WHO multimodal hand hygiene improvement strategy

1a. System change – alcohol-based handrub at point of care
+
1b. System change – access to safe, continuous water supply, soap and towels
+
2. Training and education
+
3. Evaluation and feedback
+
4. Reminders in the workplace
+
5. Institutional safety climate

In other words, the WHO multimodal improvement strategy addresses these five areas:

1. Build it (system change)

What infrastructures, equipment, supplies and other resources (including human) are required to implement the intervention?

Does the physical environment influence health worker behaviour? How can ergonomics and human factors approaches facilitate adoption of the intervention?

Are certain types of health workers needed to implement the intervention?

Practical example: when implementing hand hygiene interventions, ease of access to handrubs at the point of care and the availability of WASH infrastructures (including water and soap) are important considerations. Are these available, affordable and easily accessible in the workplace? If not, action is needed.

2. Teach it (training & education)

Who needs to be trained? What type of training should be used to ensure that the intervention will be implemented in line with evidence-based policies and how frequently?

Does the facility have trainers, training aids, and the necessary equipment?

Practical example: when implementing injection safety interventions, timely training of those responsible for administering safe injections, including carers and community workers, are important considerations, as well as adequate disposal methods.

3. Check it (monitoring & feedback)

How can you identify the gaps in IPC practices or other indicators in your setting to allow you to prioritize your intervention?

How can you be sure that the intervention is being implemented correctly and safely, including at the bedside? For example, are there methods in place to observe or track practices?

How and when will feedback be given to the target audience and managers? How can patients also be informed?

Practical example: when implementing surgical site infection interventions, the use of key tools are important considerations, such as surveillance data collection forms and the WHO checklist (adapted to local conditions).

4. Sell it (reminders & communications)

How are you promoting an intervention to ensure that there are cues to action at the point of care and messages are reinforced to health workers and patients?

Do you have capacity/funding to develop promotional messages and materials?

Practical example: when implementing interventions to reduce catheter-associated bloodstream infection, the use of visual cues to action, promotional/reinforcing messages, and planning for periodic campaigns are important considerations.

5. Live it (culture change)

Is there demonstrable support for the intervention at every level of the health system? For example, do senior managers provide funding for equipment and other resources? Are they willing to be champions and role models for IPC improvement?

Are teams involved in co-developing or adapting the intervention? Are they empowered and do they feel ownership and the need for accountability?

Practical example: when implementing hand hygiene interventions, the way that a health facility approaches this as part of safety and quality improvement and the value placed on hand hygiene improvement as part of the clinical workflow are important considerations.

Source: http://www.who.int/infection-prevention/tools/core-components/cc-implementation-guideline.pdf?ua=1

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Multimodal thinking…

3. Check it

(monitoring & feedback)

How can you identify the gaps in IPC practices or other indicators in your setting to allow you to prioritize your intervention?

How can you be sure that the intervention is being implemented correctly and safely, including at the bedside? For example, are there methods in place to observe or track practices?

How and when will feedback be given to the target audience and managers? How can patients also be informed?

Practical example: when implementing surgical site infection interventions, the use of key tools are important considerations, such as surveillance data collection forms and the WHO checklist (adapted to local conditions).

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Plan-Do-Study-Act (PDSA) cycle

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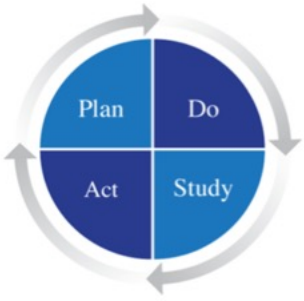
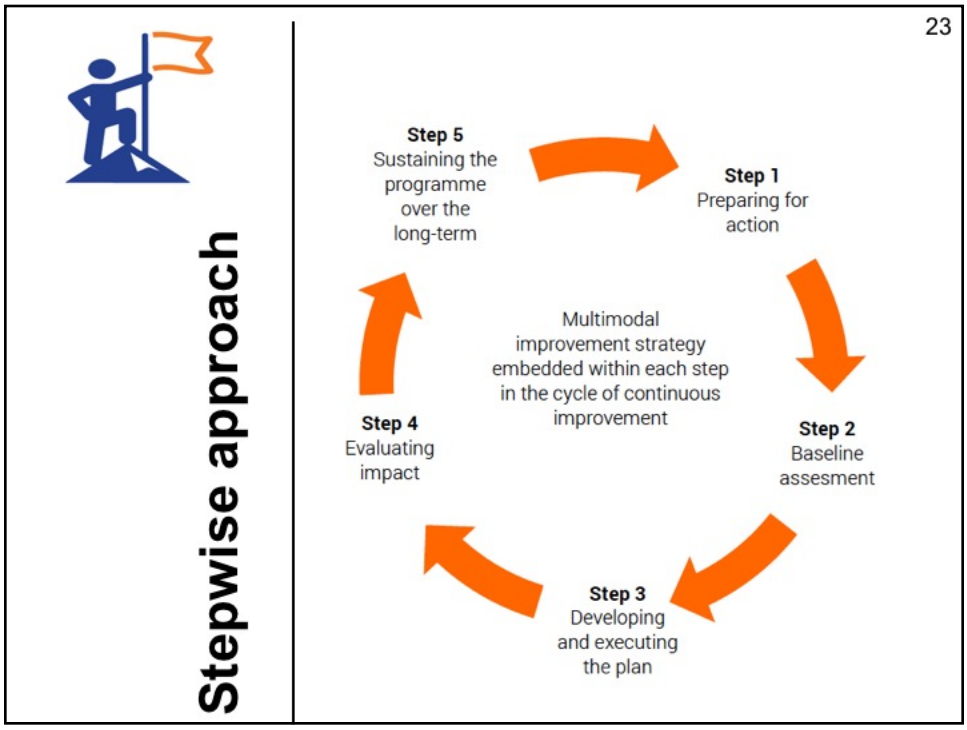


PDSA Cycle
The W. Edwards Deming Institute

- ***Quality improvement method*** that provides a ***systematic process*** for gaining valuable learning and knowledge for the continual improvement of a product, process, or service
- ***Model to accelerate improvement***

W. Edwards Deming Institute: https://deming.org/explore/p-d-s-a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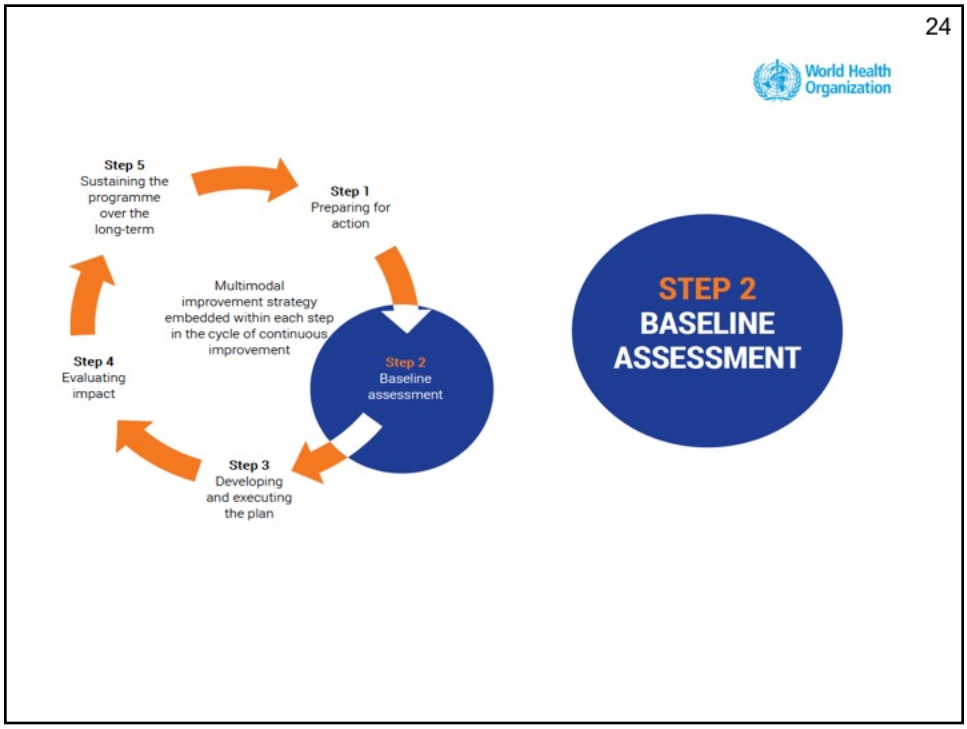
Stepwise approach
Step 1
Preparing for action
Step 2
Baseline assesment
Step 3
Developing and executing the plan
Step 4
Evaluating impact
Step 5
Sustaining the programme over the long-term
Multimodal improvement strategy embedded within each step in the cycle of continuous improvement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Step 1
Preparing for action
Step 2
Baseline assessment
Step 3
Developing and executing the plan
Step 4
Evaluating impact
Step 5
Sustaining the programme over the long-term
Multimodal improvement strategy embedded within each step in the cycle of continuous improvement
STEP 2
BASELINE
ASSESSMENT

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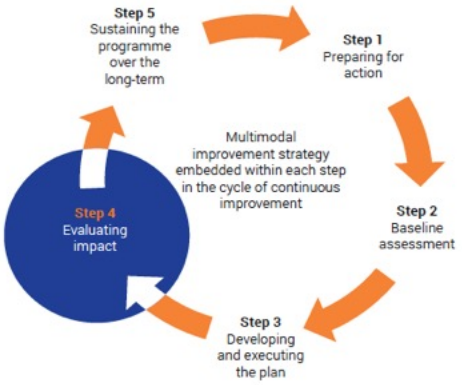

STEP 4
ASSESSING IMPACT

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Assessments in a spirit of improvement

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- Regular assessments of IPC programmes are essential for **continuous quality improvement.**
- Assessment helps to create a **sense of urgency** for the changes needed to improve IPC, taking account of the WHO core component guideline recommendations.
- Assessment also helps to identify **existing strengths** and take stock of achievements made so far to convince decision-makers that success and **progress is possible.**
- By using a **validated tool** (e.g. WHO IPCAT2), you can be confident that the information collected is meaningful and will support improvement.

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STEP 3
DEVELOPING AND EXECUTING THE PLAN

	Rapid recap	Sample action plan	Potential barriers and solutions	Tools and resources
Core component 1: IPC programmes	Page 54	Page 55	Page 56	Page 59
Core component 2: IPC guidelines	Page 62	Page 63	Page 64	Page 67
Core component 3: IPC education and training	Page 68	Page 69	Page 70	Page 72
Core component 4: HAI surveillance	Page 73	Page 74	Page 77	Page 80
Core component 5: Multimodal strategies	Page 81	Page 82	Page 83	Page 86
Core component 6: IPC monitoring/audit of IPC practices and feedback	Page 85	Page 87	Page 89	Page 90
Core component 7: Workload, staffing and bed occupancy	Page 91	Page 92	Page 93	Page 94
Core component 8: Built environment, materials and equipment for IPC	Page 95	Page 96	Page 98	Page 99

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Implementation manual and assessment tool for the national level

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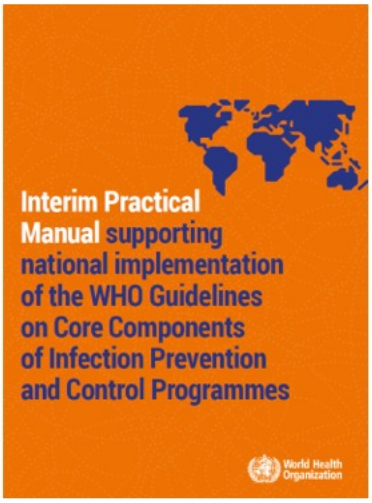

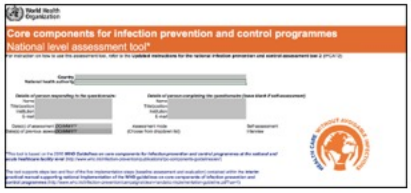

http://www.who.int/infection-prevention/tools/core-components/en/

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IPCAT2 – purpose and target audience

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The main purpose of ICPAT2 is to support implementation, thereby providing a road map to guide IPC actions.

Purpose of the tool:

- It provides a quantitative evaluation of the different components of IPC programmes in a systematic way, allowing changes to be tracked over time.
- To determine the core components already in place, i.e. existing strengths, &
- To identify gaps or weaknesses to guide action planning.
- IPCAT2 is not intended to be used as an audit tool.
- Its purpose is to help assess, plan, organize and implement a national IPC programme.
- The resulting scores can be used to measure and monitor progress in implementing IPC programmes at the national level.

Target audience:

- IPCAT2 focuses on the national IPC programme in its support of health care facilities in the country.
- IPCAT2 should be completed by health care professionals/teams responsible for organizing and implementing the national IPC programme.
- If the programme is not yet in place, the tool should be completed by professionals/senior ministerial staff who have in-depth understanding and knowledge of IPC activities in the country.

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Structure of the IPCAT2

- **6 sections**
  1. IPC programme
  2. IPC guidelines
  3. IPC education & training
  4. HAI surveillance
  5. Multimodal strategies
  6. IPC Monitoring/audits & feedback

IPC Core Components At National Level

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IPCAT2 – how to complete it

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Type of assessment:

- IPCAT2 is intended to be used for ***self-assessment***, but it can also be used for **joint assessments** with or **external assessments** by external experts.
- The self-assessment can be sufficiently objective if the responders fully realize **the purpose of the evaluation**, which is not to grade or to establish a position in a rating/ranking, but to identify strengths and weaknesses in order to effectively plan and implement improvement.
- To support assessment, one or more verifiers are suggested for each indicator.

Description of the tool

- The tool is designed in Microsoft Excel, using basic features of the software.
- IPCAT2 workbooks include an **introduction** worksheet containing details of the assessor and institution, **six separate worksheets** for the six core components at the national level, and a **summary sheet** for data visualization.
- Each component is divided into a number of sections with essential elements (indicators) of IPC programmes. Every element contains a yes/no statement. Any single element is either fully implemented (yes) or not (no). Any partially implemented or intermediate progress in achievement can be recorded in the comments' fields, as well as any additional information/clarification
- A final field presents potential verifiers to guide the user in completing the tool.

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Scoring method

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Summary of scoring method
Yes is assigned if the element exists (is implemented, introduced, etc.)
No means the element does not exist/is not implemented.
All questions must be answered. Blank answers cannot be analyzed.

1	**1**	**Infection prevention control (IPC) programmes***	**73%**
2		**Components for assessment (Red font=Gap or "N" response)**	**Score (Y or N)**
3	**1.1**	**Organization and leadership of the programme**	**63%**
4	1.1.1	An active IPC programme exists at the national level	y
5	1.1.2	An appointed infection preventionist(s) in charge of the programme can be identified	y
6	1.1.3	The appointed technical team of infection preventionist(s) includes both doctors and nurses	n
7	1.1.4	The appointed infection preventionist(s) have undergone training in IPC in the prevention of health care-associated infection (HAI)	y
8	1.1.5	The appointed infection preventionist(s) have dedicated time for the tasks (at least one full-time person)	n
9	1.1.6	The programme has been granted authority to make decisions that influence field implementation	y
10	1.1.7	There is an identified, protected and dedicated budget allocated according to planned activity	n
11	1.1.8	An official multidisciplinary group/committee or equivalent structure is established to support the IPC team at the national level (for example, national IPC committee)	y
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Summary of the results

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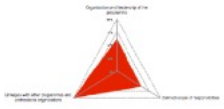
Assessment of IPC core components at the national level - summary results

IPC programmes	73%
IPC guidelines	75%
IPC education and training	100%
HAI infection surveillance	0%
Multimodal strategies	0%
Monitoring/audit of IPC practices, feedback and control activities	95%

IPC programme

Elements	Score
Organization and leadership of the programme	63%
Defined scope of responsibilities	57%
Linkages with other programmes and professional organizations	100%



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Detailed assessment: CC1

IPCAT2 Section	Strengths	Gaps
1. IPC programme	• XX	• YY

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Implementation manual and assessment framework for the health facility level

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- Based on **qualitative analysis** of examples of IPC implementation in low-resource settings
- **29 interviews** with IPC professionals from low-resource settings analysed using a **qualitative inductive thematic approach**
- Identification of **common IPC implementation themes** (appearing ≥4 times) for IPC professionals to consider (according to the 8 WHO IPC core components) and **lessons learned**

http://www.who.int/infection-prevention/tools/core-components/en/

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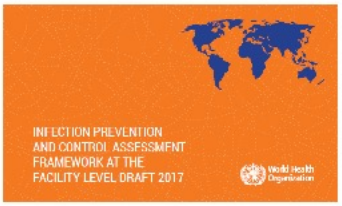
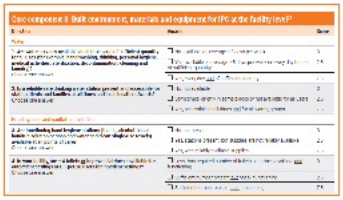
New IPC facility-level assessment tool





Box 8. IPCAF scoring interpretation

Score		Interpretation
0-200	Inadequate	IPC core components' implementation is deficient. Significant improvement is required.
201-400	Basic	Some aspects of the IPC core components are in place, but not sufficiently implemented. Further improvement is required.
401-600	Intermediate	Most aspects of IPC core components are appropriately implemented. Continue to improve the scope and quality of implementation and focus on the development of long-term plans to sustain and further promote the existing IPC programme.
601-800	Advanced	The IPC core components are fully implemented according to the WHO recommendations and appropriate to the needs of your facility.

- **Structured, closed-formatted questionnaire** with an associated scoring system based on the HHSAF approach; **81 indicators**
- **Self- or joint-assessments**
- Template for data interpretation, discussion and action planning
- Tested for usability, reliability and construct validity in a sample of **181 acute health care facilities in 46 countries** across the world

http://www.who.int/infection-prevention/tools/core-components/en/

Organization

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WHO Hand Hygiene Self-Assessment Framework


World Health Organization | Patient Safety | SAVE LIVES Clean Your Hands

Hand Hygiene
Self-Assessment Framework 2010

Introduction and user instructions

A validated and systematic tool to obtain a situational analysis of hand hygiene infrastructure, promotional activities, performance monitoring and feedback, and institutional commitment

https://www.who.int/infection-prevention/tools/hand-hygiene/en/

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WHO Hand Hygiene Self-Assessment Framework Global Survey
Summary Report

Table 1: Hand Hygiene Self-Assessment Framework; WHO global surveys 2011 vs. 2015 (86 healthcare facilities, from 31 countries*)

	2011	2015	P-value
Overall score (mean±SD, median) (n=86)	335.1 (±97.5, 351)	374.4 (±90.5, 392.5)	<0.001**
By components (mean±SD, median)			
System change (n=84)	85.2 (±21.5, 100.0)	88.2 (±21.3, 100.0)	0.391**
Training and education (n=85)	71.7 (±21.0, 75.0)	77.1 (±21.7, 80.0)	0.014**
Evaluation and feedback (n=84)	59.6 (±24.4, 65.0)	69.2 (±22.8, 75.0)	<0.001**
Reminders in the workplace (n=85)	68.9 (±24.5, 70.0)	75.4 (±20.8, 80.0)	0.006**
Institutional safety climate for hand hygiene (n=85)	54.6 (±25.2, 55.0)	63.8 (±25.8, 65.0)	<0.001**
Hand hygiene level, n (%)(n=86)			<0.001***
Inadequate	2 (2.3)	1 (1.2)	
Basic	16 (18.6)	10 (11.6)	
Intermediate (or consolidation)	37 (43.0)	23 (26.7)	
Advanced (or embedding)	31 (36.1)	52 (60.5)	
Score for leadership criteria on 31 hospitals (mean±SD, median)	14.3 (±3.7)	15.8 (±2.7)	0.043**
Proportion of centers with a leadership score >=12 (%) (n=31)	28 (90.3)	30 (96.8)	0.625***

Kilpatrick C, et al. Global hand hygiene improvement progress: two surveys using the WHO Hand Hygiene Self-Assessment Framework. *Journal of Hospital Infection* (2018), doi: 10.1016/j.jhin.2018.07.036.
https://www.who.int/gpsc/5may/summary_report_HHSAF_global_survey_May12.pdf?ua=1

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IPC & HH Assessment Frameworks

- ***Diagnostic tools***
- ***Tested and validated tools***
- **Structured, closed-formatted, self-administered questionnaires** with an associated **scoring system**
- **AIM:** to assess existing IPC & HH activities/resources and identify strengths and gaps that can inform future plans, and monitor progress over time
- Results can be used to develop a facility action plan **to strengthen existing measures** and **motivate facilities to intensify efforts** where needed, in order to meet international standards and requirements

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IPC assessment framework (IPCAF)

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Core component 1: Infection Prevention and Control (IPC) programme		
Question	**Answer**	**Score**
1. Do you have an IPC programme?[1] Choose one answer	☐ No	0
	☐ Yes, without clearly defined objectives	5
	☐ Yes, with clearly defined objectives and annual activity plan	10
2. Is the IPC programme supported by an IPC team comprising of IPC professionals?[2] Choose one answer	☐ No	0
	☐ Not a team, only an IPC focal person	5
	☐ Yes	10
3. Does the IPC team have at least one full-time IPC professional or equivalent (nurse or doctor working 100% in IPC) available? Choose one answer	☐ No IPC professional available	0
	☐ No, only a part-time IPC professional available	2.5
	☐ Yes, one per > 250 beds	5
	☐ Yes, one per ≤ 250 beds	10
4. Does the IPC team or focal person have dedicated time for IPC activities?	☐ No	0
	☐ Yes	10
5. Does the IPC team include both doctors and nurses?	☐ No	0
	☐ Yes	10
6. Do you have an IPC committee[3] **actively supporting the IPC team?**	☐ No	0
	☐ Yes	10
7. Are any of the following professional groups represented/included in the IPC committee?		
Senior facility leadership (for example, administrative director, chief executive officer [CEO], medical director)	☐ No	0
	☐ Yes	5
Senior clinical staff (for example, physician, nurse)	☐ No	0
	☐ Yes	2.5

The main purpose of ICPAF is to support implementation, thereby providing a road map to guide IPC actions.

http://www.who.int/infection-prevention/tools/core-components/en/

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Structure of the IPC Assessment Framework

- **8 sections**
  1. IPC programme
  2. IPC guidelines:
  3. IPC education & training:
  4. HAI surveillance:
  5. Multimodal strategies:
  6. IPC Monitoring/audits & feedback:
  7. Workload, staffing, bed occupancy:
  8. Built environment

IPC Core Components

- ***Who*** **completes it:** Health care professionals responsible for organising and implementing IPC measures and who have in-depth knowledge of IPC at the facility level

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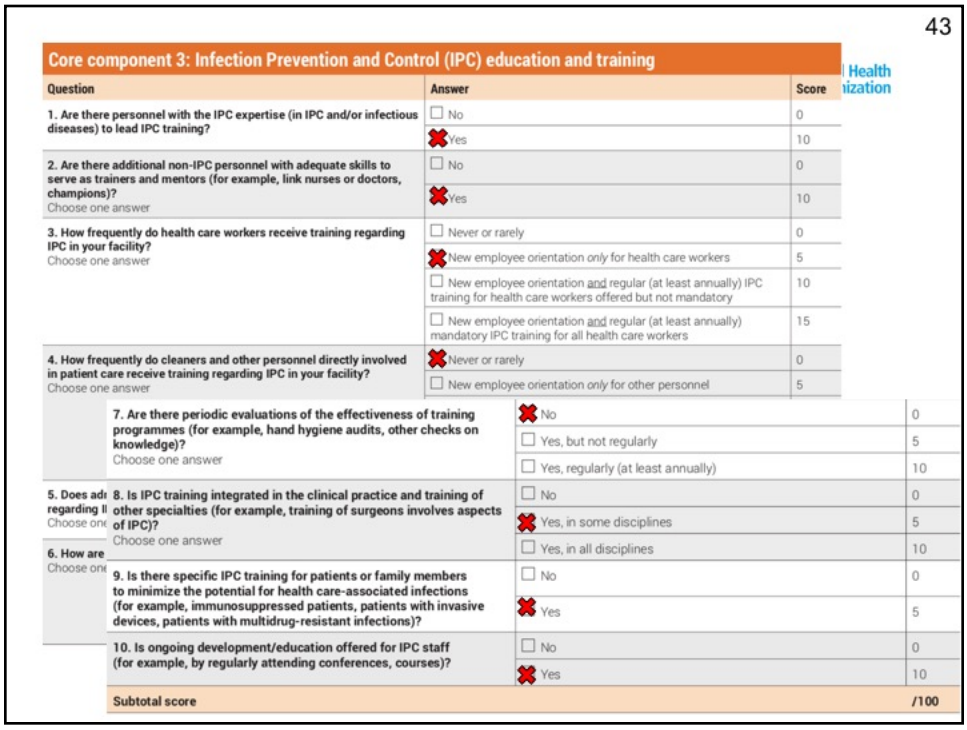
Core component 3: Infection Prevention and Control (IPC) education and training

Question	Answer	Score
1. Are there personnel with the IPC expertise (in IPC and/or infectious diseases) to lead IPC training?	☐ No	0
	☒ Yes	10
2. Are there additional non-IPC personnel with adequate skills to serve as trainers and mentors (for example, link nurses or doctors, champions)? Choose one answer	☐ No	0
	☒ Yes	10
3. How frequently do health care workers receive training regarding IPC in your facility? Choose one answer	☐ Never or rarely	0
	☒ New employee orientation *only* for health care workers	5
	☐ New employee orientation and regular (at least annually) IPC training for health care workers offered but not mandatory	10
	☐ New employee orientation and regular (at least annually) mandatory IPC training for all health care workers	15
4. How frequently do cleaners and other personnel directly involved in patient care receive training regarding IPC in your facility? Choose one answer	☒ Never or rarely	0
	☐ New employee orientation *only* for other personnel	5
	☐ New employee orientation and regular (at least annually) training for other personnel offered but not mandatory	10
	☐ New employee orientation and regular (at least annually) mandatory IPC training for other personnel	15
5. Does administrative and managerial staff receive general training regarding IPC in your facility? Choose one answer	☐ No	0
	☒ Yes	5
6. How are health care workers and other personnel trained? Choose one answer	☐ No training available	0
	☒ Using written information and/or oral instruction and/or elearning *only*	5
	☐ Includes *additional* interactive training sessions (for example, simulation and/or bedside training)	10



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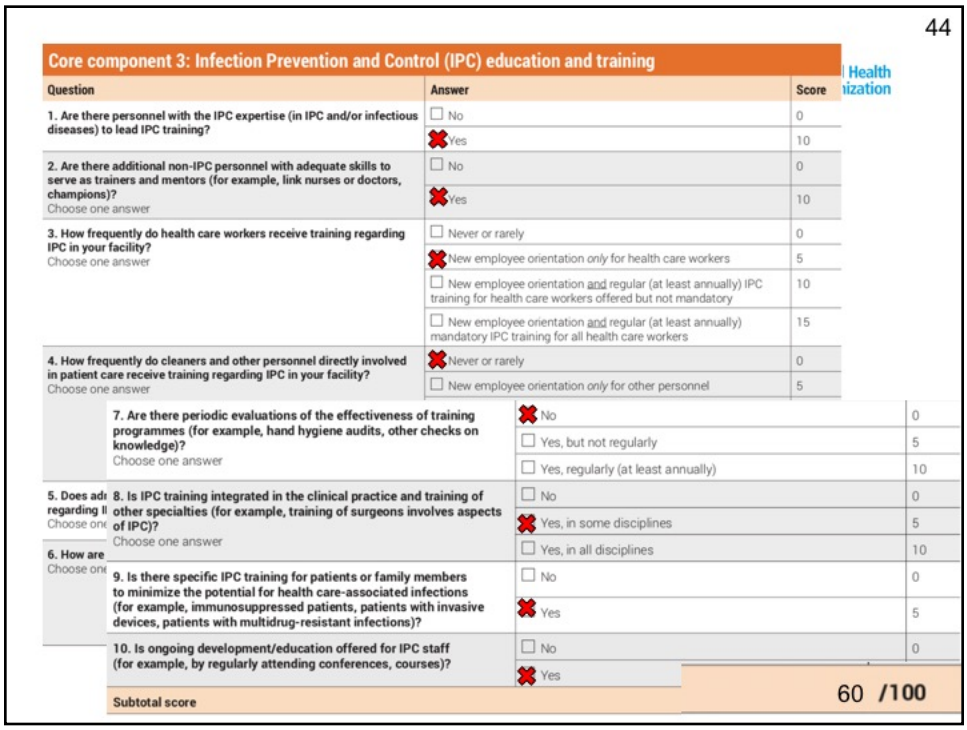
	☐ New employee orientation and regular (at least annually) mandatory IPC training for all health care workers	15
4. How frequently do cleaners and other personnel directly involved in patient care receive training regarding IPC in your facility? Choose one answer	☒ Never or rarely	0
	☐ New employee orientation *only* for other personnel	5
7. Are there periodic evaluations of the effectiveness of training programmes (for example, hand hygiene audits, other checks on knowledge)? Choose one answer	☒ No	0
	☐ Yes, but not regularly	5
	☐ Yes, regularly (at least annually)	10
8. Is IPC training integrated in the clinical practice and training of other specialties (for example, training of surgeons involves aspects of IPC)? Choose one answer	☐ No	0
	☒ Yes, in some disciplines	5
	☐ Yes, in all disciplines	10
9. Is there specific IPC training for patients or family members to minimize the potential for health care-associated infections (for example, immunosuppressed patients, patients with invasive devices, patients with multidrug-resistant infections)?	☐ No	0
	☒ Yes	5
10. Is ongoing development/education offered for IPC staff (for example, by regularly attending conferences, courses)?	☐ No	0
	☒ Yes	10
Subtotal score		/100



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	☒ Yes	5
10. Is ongoing development/education offered for IPC staff (for example, by regularly attending conferences, courses)?	☐ No	0
	☒ Yes	
Subtotal score		60 /100

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IPCAF – analysis and interpretation of the results

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1. Add up your points

	Score
Section (Core component)	**Subtotals**
1. IPC programme	45
2. IPC guidelines	60
3. IPC education and training	75
4. HAI surveillance	20
5. Multimodal strategies	45
6. Monitoring/audits of IPC practices and feedback	50
7. Workload, staffing and bed occupancy	65
8. Built environment, materials and equipment for IPC at the facility level	30
Final total score	**390** /800

2. Determine the assigned "IPC level" in your facility using the total score from Step 1

Total score (range)	**IPC level**
0–200	Inadequate
201–400	Basic
401–600	Intermediate
601–800	Advanced

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Interpreting results

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Box 8. IPCAF scoring interpretation

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601-800	Advanced	The IPC core components are fully implemented according to the WHO recommendations and appropriate to the needs of your facility.

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IPCAF – Review the results and develop an action plan

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- Review the areas identified by this evaluation as requiring improvement in your facility and develop an action plan to address them.
- To undertake this task, consult the WHO *Interim practical manual* supporting implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes which will provide you with guidance, templates, tips, and examples from around the world as well as with a list of relevant IPC improvement tools.
- Keep a copy of this assessment to compare with repeated uses in the future.

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Detailed facility assessment

IPCSAF Section	Strengths	Gaps
1. IPC programme		
2. IPC guidelines		

Repeat this table up to Core Component 8

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What help you can find

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PRACTICAL TIPS, KEY CONSIDERATIONS AND ACTIONS

IMPLEMENTATION BARRIERS AND SOLUTIONS

TOOLS AND RESOURCES

CASE STUDY EXAMPLES

http://www.who.int/infection-prevention/tools/core-components/en/

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Example action plan templates

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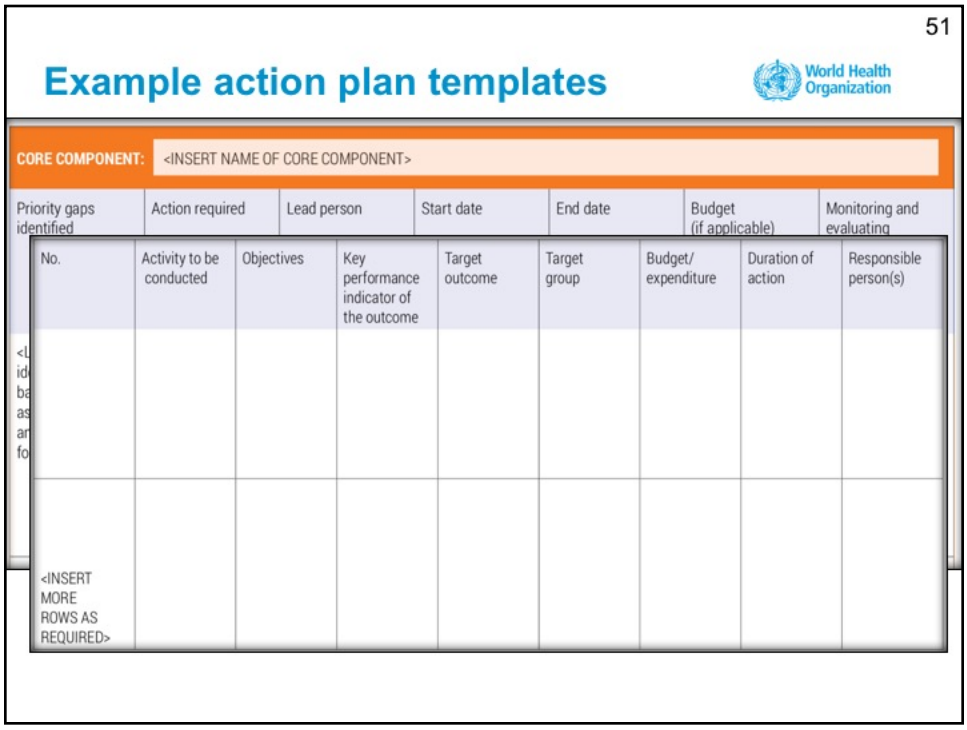
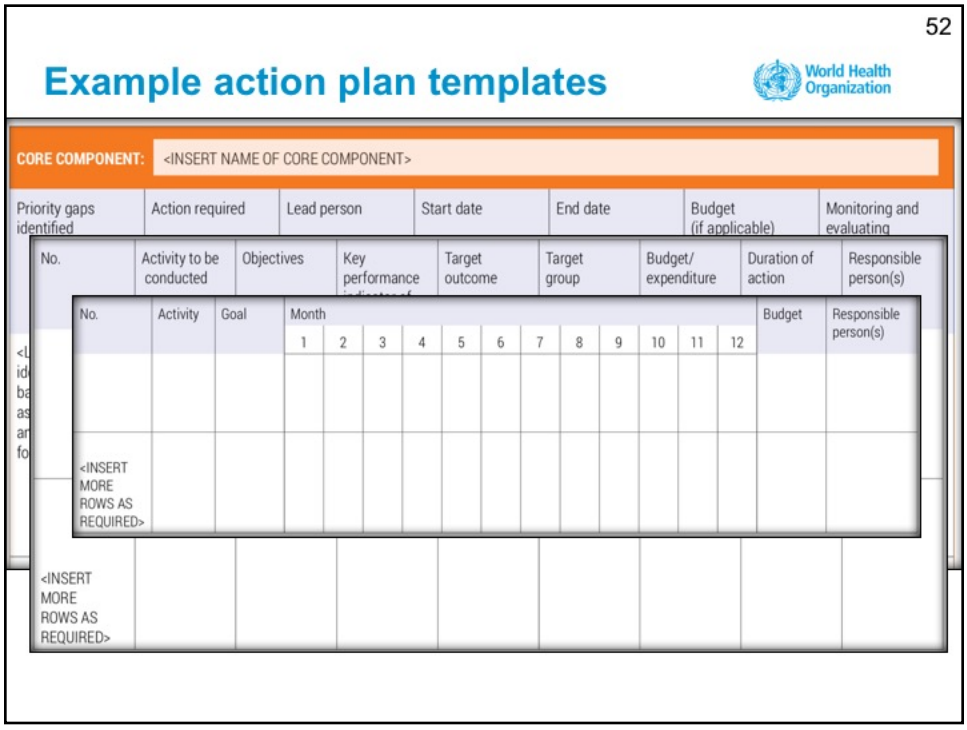
CORE COMPONENT:	<INSERT NAME OF CORE COMPONENT>					
Priority gaps identified	Action required	Lead person	Start date	End date	Budget (if applicable)	Monitoring and evaluating implementation progress (include review/ completion dates)
<List all gaps identified from baseline assessment and prioritized for action>	<List the actions that are planned using information gathered as you work through the 5 steps of the implementation cycle>	<List the lead person or group driving the action plan>	<State when the action will start to be addressed>	<Estimate the deadline for action to be completed, including periodic review dates if applicable>	<Estimate the budget required to address the required actions>	<Describe the progress that has been made at each review date including decisions and actions taken, and the need for further actions to be taken to achieve completion>


51
Example action plan templates
World Health Organization
CORE COMPONENT: <INSERT NAME OF CORE COMPONENT>
Priority gaps identified
Action required
Lead person
Start date
End date
Budget (if applicable)
Monitoring and evaluating
No.
Activity to be conducted
Objectives
Key performance indicator of the outcome
Target outcome
Target group
Budget/ expenditure
Duration of action
Responsible person(s)
<INSERT MORE ROWS AS REQUIRED>


52
Example action plan templates
World Health Organization
CORE COMPONENT: <INSERT NAME OF CORE COMPONENT>
Priority gaps identified
Action required
Lead person
Start date
End date
Budget (if applicable)
Monitoring and evaluating
No.
Activity to be conducted
Objectives
Key performance
Target outcome
Target group
Budget/ expenditure
Duration of action
Responsible person(s)
No.
Activity
Goal
Month
1 2 3 4 5 6 7 8 9 10 11 12
Budget
Responsible person(s)
<INSERT MORE ROWS AS REQUIRED>
<INSERT MORE ROWS AS REQUIRED>

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Example action plan templates

World Health Organization

CORE COMPONENT: <INSERT NAME OF CORE COMPONENT>

Priority gaps identified	Action required	Lead person	Start date	End date	Budget (if applicable)	Monitoring and evaluating
<INSERT MORE ROWS AS REQUIRED>						

No.	Activity to be conducted	Objectives	Key performance	Target outcome	Target group	Budget/ expenditure	Duration of action	Responsible person(s)
<INSERT MORE ROWS AS REQUIRED>								

No.	Activity	Goal	Month	Budget	Responsible person(s)
<INSERT MORE ROWS AS REQUIRED>			1 2 3 4 5 6 7 8 9 10 11 12		

Name of facility: ..... Unit: ..... Date: ...../...../..... Unit head signature: .....

IPC area where gap is identified	Defective practices to be stopped (where appropriate)	Proposed solution(s)	Time for effecting solution(s)	Expected outcome	Person(s) responsible	Resources
<INSERT MORE ROWS AS REQUIRED>						

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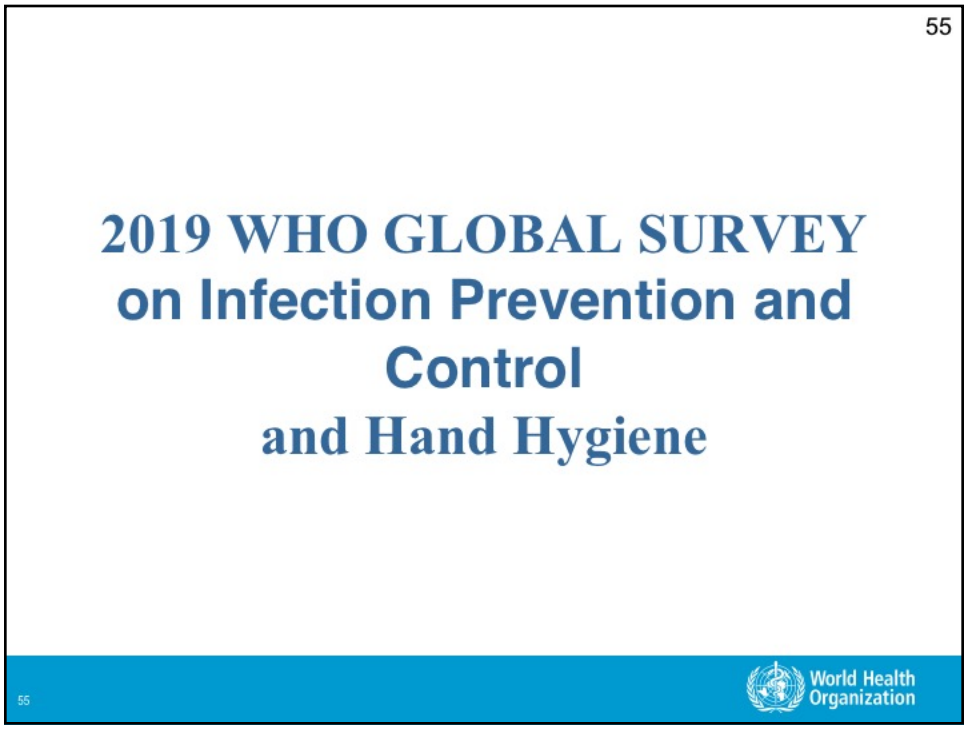
SAMPLE ACTION PLAN: IPC GUIDELINES

Priority gap	Action required and link to available tools/ resources	Lead person and other team members	Timeline	Budget/ resources
No (evidence-based, consistent) IPC guidelines available (and no engagement of other clinicians and managers in this process)	• Source national, regional or international evidence-based guidelines and/or source guidelines developed and approved in other similar facilities. • Adapt the content of other guidelines if necessary to the facility needs. • Review the sample of national guidelines in the tools and resources section.	• IPC lead/focal person • Microbiologist or infectious diseases specialist (if different from lead) • Public health experts • Others with experience of writing guidelines • Sample of facility clinicians and managers	6 months	Low

SAMPLE ACTION PLAN: IPC TRAINING AND EDUCATION

Priority gap	Action required and link to available tools/resources	Lead person and other team members	Timeline	Budget/ resources
No expertise in how to develop and execute effective IPC training	• Source competencies for IPC training and map to available staff. • Develop and submit a report on the competency status of available staff to senior managers highlighting gaps and the need to build capacity through training and mentorship.	• IPC lead/focal person	3 months	Low
No routine programme of IPC training	• Develop a programme of IPC training using WHO training modules (see tools and resources).	• IPC lead/focal person	3 months	Moderate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2019 WHO GLOBAL SURVEY
on Infection Prevention and Control
and Hand Hygiene
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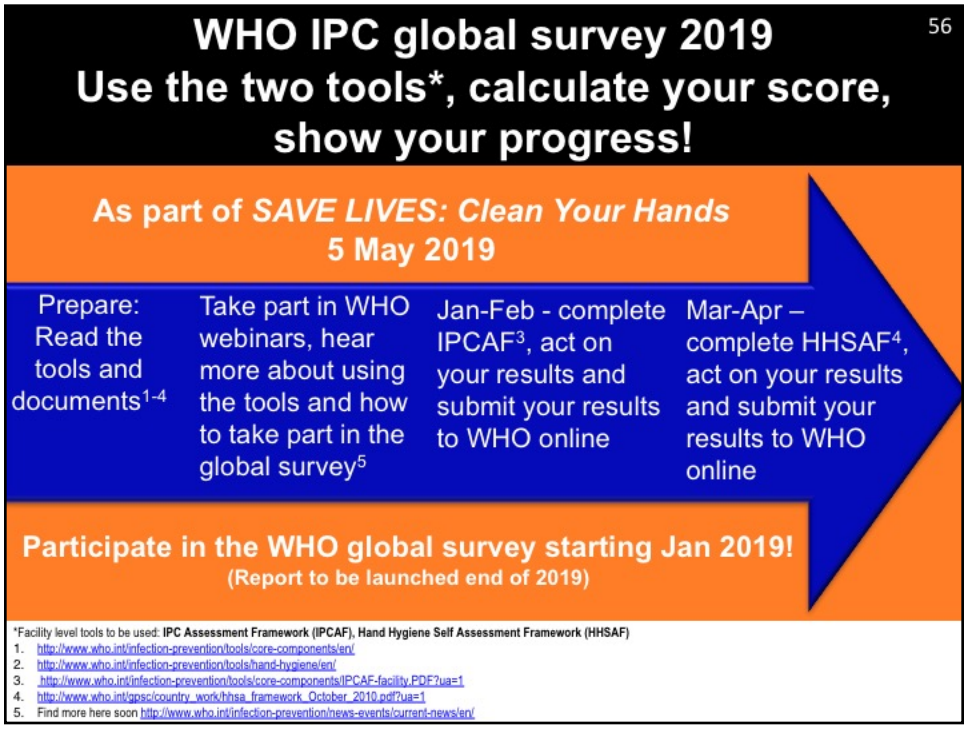
World Health Organization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WHO IPC global survey 2019
Use the two tools*, calculate your score, show your progress!
As part of SAVE LIVES: Clean Your Hands
5 May 2019
Prepare: Read the tools and documents[1-4]
Take part in WHO webinars, hear more about using the tools and how to take part in the global survey[5]
Jan-Feb - complete IPCAF[3], act on your results and submit your results to WHO online
Mar-Apr – complete HHSAF[4], act on your results and submit your results to WHO online
Participate in the WHO global survey starting Jan 2019!
(Report to be launched end of 2019)
*Facility level tools to be used: IPC Assessment Framework (IPCAF), Hand Hygiene Self Assessment Framework (HHSAF)
1. http://www.who.int/infection-prevention/tools/core-components/en/
2. http://www.who.int/infection-prevention/tools/hand-hygiene/en/
3. http://www.who.int/infection-prevention/tools/core-components/IPCAF-facility.PDF?ua=1
4. http://www.who.int/gpsc/country_work/hhsa_framework_October_2010.pdf?ua=1
5. Find more here soon http://www.who.int/infection-prevention/news-events/current-news/en/

SAVE LIVES: Clean Your Hands - 5 May 2019

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Monitoring IPC & Hand Hygiene – WHO Global Survey 2019

- **Tools:** IPC Assessment Framework (IPCAF)* & Hand Hygiene Self-assessment Framework (HHSAF)**
- **Timeline:**
  - Survey conduct: 14 January - 14 May 2019
  - Survey analysis: May-August 2019
- **Sample:**
  - Open voluntary participation by health care facilities around the world + countries
  - Stratified sub-sample
- **Data submission:** online protected system
- **Data confidentiality and property:** WHO's and MS (upon specific agreement) – data completely anonimized
- **Planning:**
  - Month 1: preparations for IPCAF
  - Month 2: IPCAF completion
  - Month 3: preparations for HHSAF
  - Month 4: HHSAF completion

I. Tools completion on paper at HCF level → II. Submission online or by email

- **Report:** to be issued by WHO by 2019

*http://www.who.int/infection-prevention/tools/core-components/IPCAF-facility.PDF?ua=1
**http://www.who.int/gpsc/country_work/hhsa_framework_October_2010.pdf?ua=1

World Health Organization

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THANK YOU!!!

WHO Infection Prevention and Control Global Unit

HEALTH CARE WITHOUT AVOIDABLE INFECTIONS

Learn more at:
http://www.who.int/infection-prevention/en/

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www.webbertraining.com/schedulep1.php

January 17, 2019	*(FREE … WHO Teleclass - Americas)* **THE 2019 WHO GLOBAL SURVEY** Speaker: **Prof. Didier Pitter** and **Prof. Benedetta Allegranzi**, World Health Organization **Sponsored by the World Health Association**
January 31, 2019	**BARRIERS AND FACILITATORS TO CLOSTRIDIUM DIFFICILE INFECTION PREVENTION, A NURSING PERSPECTIVE** Speaker: **Dr. Nasia Safdar**, University of Wisconsin School of Medicine and Public Health
February 5, 2019	*(European Teleclass)* **ISSUES IN ANTIFUNGAL STEWARDSHIP: AN OPPORTUNITY THAT SHOULD NOT BE LOST** Speaker: **Dr. Ramasubramanian**, The Capstone Clinic, Tamil Nadu, India
February 7, 2019	*(FREE Teleclass)* **THE EFFECTIVENESS OF TUBERCULOSIS INFECTION CONTROL STRATEGY IN HIGH HIV/TB-BURDEN SETTINGS** Speaker: **Dr. Eltony Mugomeri**, Africa University in Zimbabwe
	(South Pacific Teleclass) **THE INTRODUCTION OF RISK-BASED ASSESSMENT FOR THE MANAGEMENT**