

Leadership and programme management in infection prevention and control: a trainer's guide

Outline of the module

The *Leadership and programme management in infection prevention and control (IPC)* advanced training module is part of a package designed for advanced IPC focal persons working in low-resource settings. It is designed to support the implementation of the World Health Organization (WHO) *Guidelines on core components of IPC programmes at the national and acute health care facility level*¹ as part of a multifaceted approach to capacity building.

Target audience

This training is designed for individuals and teams who are intending to occupy a senior leadership position in IPC at the national, sub-national and health facility level. Trainees are expected to possess at least basic experience and competence in IPC and could include (not exhaustive) IPC professionals, IPC hospital teams, facility administrators, hospital epidemiologists, microbiologists or other relevant health care professionals. The advanced training package complements a basic training package intended for all frontline healthcare workers.

Objectives of the module

The objectives of the module are to equip the advanced IPC focal person to:

1. define the roles and responsibilities of an IPC focal person;
2. describe the requirements of an IPC programme according to the WHO core components' guidelines;
3. demonstrate key leadership skills;
4. demonstrate conflict management and communication skills;
5. advocate for IPC as a priority in health care, as well as describing the need for synergies with other programmes;
6. foster teamwork;
7. lead project development, management and budget planning necessary for an IPC programme;
8. describe key IPC implementation strategies, including considerations of behaviour change and the application of multimodal strategies and campaigning.

Overview

This module is to be delivered during a one-day training session. The training comprises a blend of PowerPoint slides, audiovisual material and a student handbook. The training is divided into four sessions.

Session 1: The role of the IPC focal person in developing and implementing IPC programmes (120 minutes including stretch/refreshment breaks).

¹ <http://www.who.int/infection-prevention/publications/ipc-components-guidelines/en/>, accessed 23 January 2018.

Session 2: Becoming an IPC leader – an exploration of what makes an effective leader (90 minutes including stretch/refreshment breaks).

Session 3: Implementation strategies and behaviour change (90 minutes including stretch/refreshment breaks).

Session 4: Effective communication in IPC (45 minutes).

Materials needed

All materials should be collected and reviewed prior to starting the training.

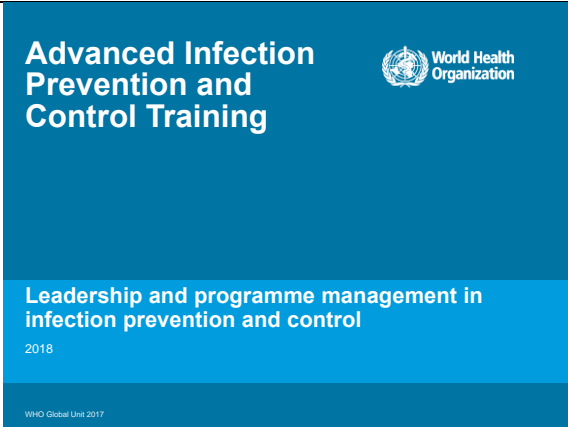
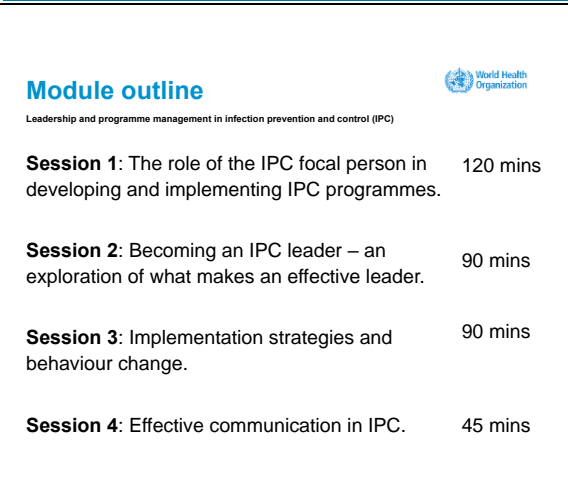
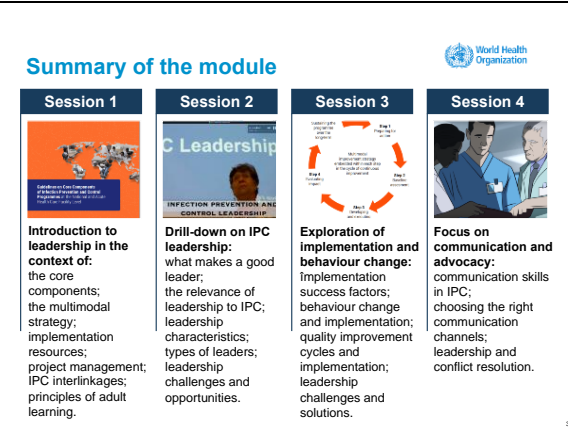
- PowerPoint slide deck.
- One facilitator's guide.
- Student handbook (includes handouts and group work instructions).
- WHO *Guidelines on core components of IPC programmes*.
- Core components and leadership videos.
- Practical manuals to support implementation of the core components.
- Tools to assess the level of progress in the implementation of the core components at national and facility level (IPC Assessment Tool - national level) [IPCAT2], IPC Assessment Framework [IPCAF] and the Hand Hygiene Self-Assessment Form [HHSAF].
- Laptop and data projector capable of playing video and audio.
- Flip chart and pens.
- Paper for students to use during group work.












Evaluation







The same pre- and post-test evaluation (annex 1) will be distributed to participants at the beginning and end of the training to evaluate participants' knowledge of HAI surveillance.


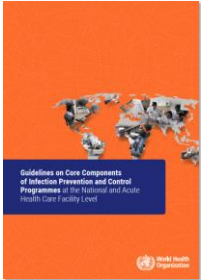








Pre-test evaluation will develop a baseline score by measuring existing knowledge and knowledge gaps. Post-test evaluation will assess the knowledge gained through the training. A score of 85% or higher on the post-test indicates knowledge-based mastery of the training material. For students scoring less than 85%, the facilitator should review the results with the student individually and provide guidance accordingly. Successful completion of the course is based on mastery of both the content and IPC practice/skill components.

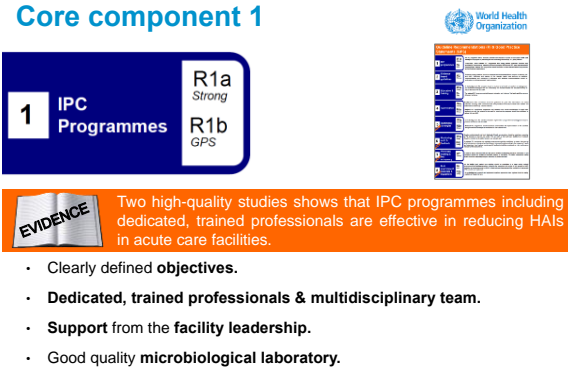
Instruction for trainers

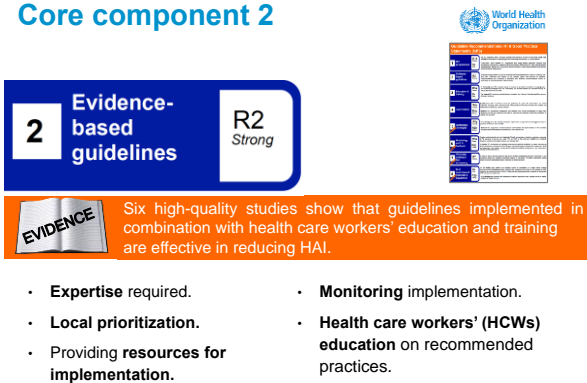
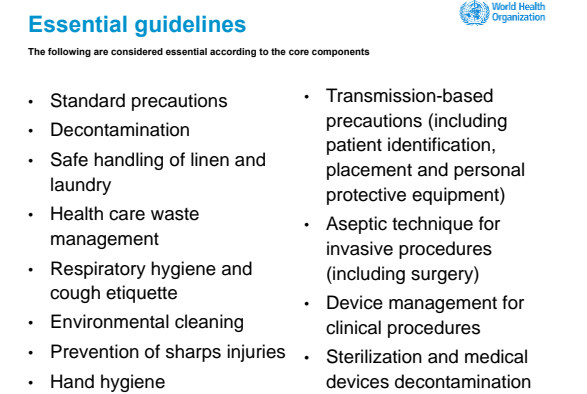
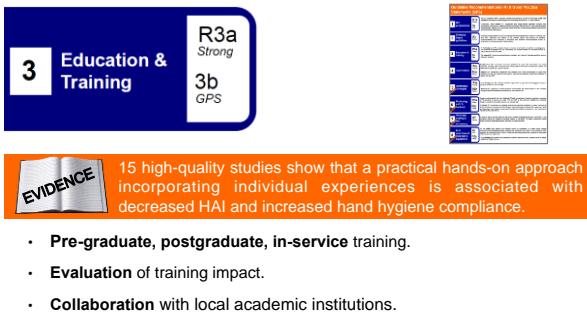
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
1		<ul style="list-style-type: none"> • Introduce yourself and welcome the participants to the module. • If there are any safety/administrative announcements make them now. 	
2		<p>MODULE OUTLINE</p> <ul style="list-style-type: none"> • Read the slide. • Give a 1-2 minute overview of the whole workshop, not in detail, just say: “Areas such as leadership, communication, teaching and learning will be covered during today’s session, together with practical work to familiarize you with the concepts presented”. 	
3		<ul style="list-style-type: none"> • Talk through the slide so that the student has a little more understanding of the content of each session and emphasize how each session links to and builds on the previous one. 	

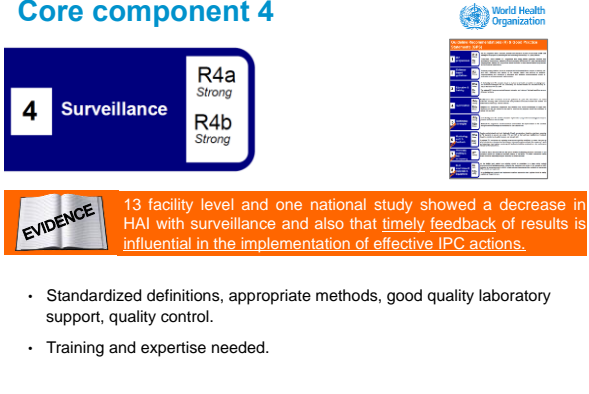
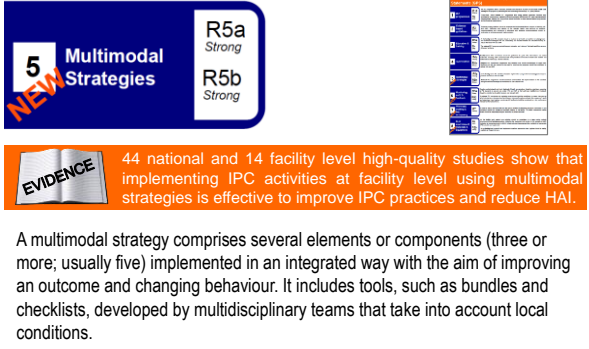
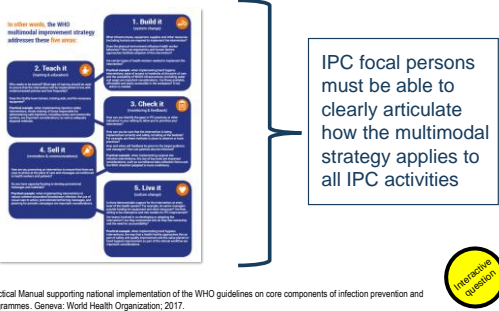
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
4	<p>The symbols explained </p> <ul style="list-style-type: none">  You are encouraged to participate in discussion questions, where you can use your own experience and prior knowledge.  You are encouraged to participate in group activities to drill into key topics.  Essential content (not to be missed!).  Key reference for consolidating learning.  Some suggested answers to activities/group work.  In-depth case study applying learning into practice.  Video material to supplement learning.  Required reading or reflection outside of the classroom. 	<p>THE SYMBOLS</p> <ul style="list-style-type: none"> Read the explanations from the screen. 	
5	<p>Session 1: </p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>The role of the IPC focal person</p> </div>	<p>SESSION 1</p> <ul style="list-style-type: none"> The first session addresses the role of the IPC focal person. 	
6	<p>Competencies </p> <ul style="list-style-type: none"> Lead the design, prioritization, implementation and evaluation of an evidence-based IPC programme, informed by project management principles. Advocate for synergy between IPC and related programmes including patient safety, quality improvement and other vertical programmes. Successfully influence relevant stakeholders to gain support and necessary resources for an IPC programme. Support educational interventions and a learning environment to address gaps in knowledge, skills and competence of IPC workers. 	<p>COMPETENCIES</p> <ul style="list-style-type: none"> Read the slide. Emphasize that these are the learning outcomes that the attendees will attain through completion of this module. 	




	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
7	<p>Learning objectives</p>  <ul style="list-style-type: none"> • Demonstrate awareness of the role of the IPC focal person. • Describe core functions and responsibilities of the IPC focal person. • Identify leadership development opportunities for IPC focal persons. • Consider appropriate programme and project management strategies to support IPC programme development and implementation. • Develop teaching approaches that satisfy a variety of learners. 	<p>LEARNING OBJECTIVES</p> <ul style="list-style-type: none"> • Read the slide. • Emphasize that these objectives are the knowledge and skills that the attendees will be able to demonstrate on completion of the module. • ICE BREAKER • At this point ask the participants to introduce themselves to the person next to them and share with them one fact about why they are interested in IPC. 	<ul style="list-style-type: none"> • Allow 2-3 minutes for the exchange of information. Then allow 10 minutes for a rapid sharing of information learned during the exercise. Go round the room, asking each person to tell us the name and the fact about their partner.
8	<p>Key points</p>  <ul style="list-style-type: none"> • The WHO core components are a road map for how IPC can prevent harm due to health care-associated infection (HAI) and antimicrobial resistance (AMR). • The IPC focal person¹ should oversee the development, implementation, coordination and evaluation of the IPC programme and all its activities. • The development of leadership and programme management skills supports success. • IPC focal persons must be aware of their important role in advocating for a multimodal approach to improvement. <p>¹IPC focal person is a term used to denote the lead IPC practitioner at every level of the health care system.</p> 	<p>KEY POINTS</p> <ul style="list-style-type: none"> • Read the slide. • Emphasize that the WHO core component guidelines are a roadmap for effective implementation and, similar to any map, they require some interpretation. To this end, the IPC focal person is the key player on the 'ground' to develop, coordinate and oversee their implementation. 	
9	<p>Impact of effective IPC</p>   <p>http://www.who.int/gpsc/HAI-Infographic.pdf?ua=1</p>	<ul style="list-style-type: none"> • It is important to now bring this back to the overarching purpose of IPC and hence the overarching purpose of what an IPC leader does. • An IPC programme with effective leadership is the solution to the problem of health care-associated infection (HAI). • IPC programmes impact on patient outcome, they reduce harm and they improve the quality of care and help to stop the spread 	<p>Infographic link: http://www.who.int/gpsc/HAI-Infographic.pdf?ua=1</p>

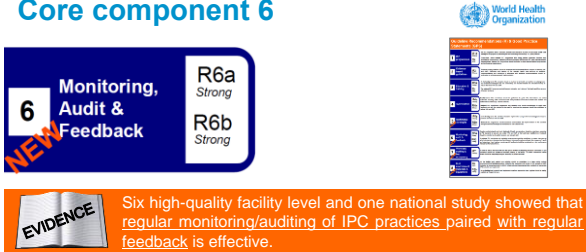
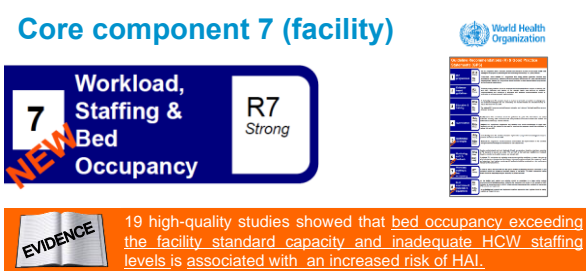
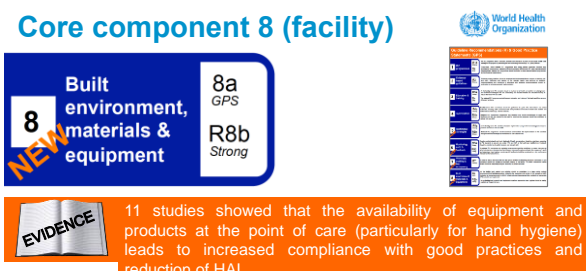
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		of antibiotic resistance.	
10	<p>The core components of an IPC programme</p>   <ul style="list-style-type: none"> • WHO guidelines (2016). • A critical resource for IPC leaders. • Describe the evidence-based core elements of an effective IPC programme at the national and acute health care facility level. <p>http://www.who.int/infection-prevention/publications/core-components/en/</p> 	<p>CORE COMPONENTS OF AN IPC PROGRAMME</p> <ul style="list-style-type: none"> • The point of this slide is to introduce the core components' guidelines and emphasize that these guidelines are a key resource for IPC leaders. • They describe the evidence-based core elements of an IPC programme at the national and acute health care facility level. 	<p>Core component guidelines http://www.who.int/infection-prevention/publications/ipc-components-guidelines/en/</p>
11	<p>IPC leaders describe the Core Components</p>   <p>https://www.youtube.com/watch?v=LZapz2L6J1Q&feature=youtu.be</p> 	<p>CORE COMPONENTS VIDEO</p> <ul style="list-style-type: none"> • Now play the video explaining the core components' guidelines in the words of international leaders in IPC. • Emphasize that the video is less than 10 minutes long and could be used to explain to senior leaders and managers the core components – it is therefore a potentially powerful advocacy tool. 	<p>Core components advocacy video (10 minutes): https://www.youtube.com/watch?v=LZapz2L6J1Q&feature=youtu.be</p>
12	<p>Handouts 1 & 2</p> <p>Refer to handouts 1 & 2 in the student handbook for the next part of the session</p>    <p>Handout 1</p> <p>Handout 2</p> 	<ul style="list-style-type: none"> • HANDOUTS 1 AND 2 • Ask the attendees to look at handouts 1 and 2 in their student handbook. • Explain that handout 1 is a summary two-page document that lists the eight core components and provides a brief description of each component – say that we will be referring to it during the next part of the session. • Ask attendees to look at handout 2 – the one-page visual summary of the core 	<p>Handout 1: Core component summary document http://www.who.int/gpsc/cc_summary.pdf?ua=1</p> <p>Handout 2: Core component visual http://www.who.int/infection-prevention/campaigns/clean-hands/ipc-cc_visual.pdf?u</p>

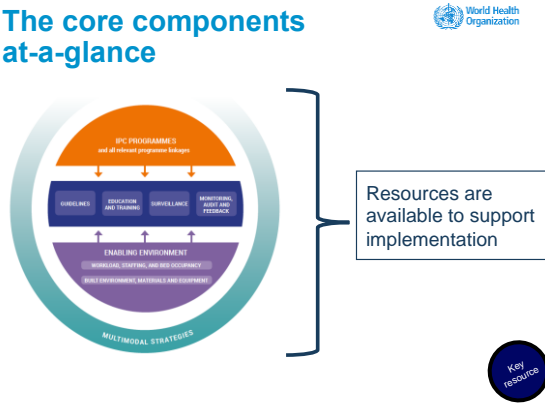
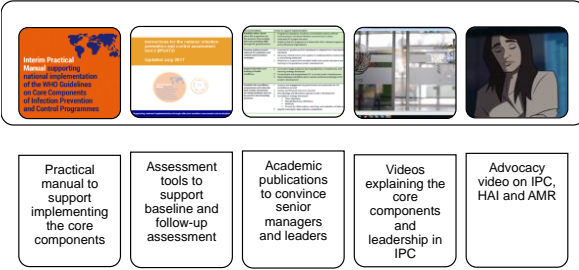
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>components.</p> <ul style="list-style-type: none"> • Highlight the interconnection between the different components. Say: “It is important to recognize how leadership is/should be the ‘glue’ between the different elements”. • Emphasize the importance of familiarizing ‘yourself’ with these important guidelines and all of the associated implementation resources – knowledge is part of leadership and helps build credibility in followers! • Explain that the visual “burger” diagram summarizes all of the core components and say: “We will now zoom in on each component and the associated recommendations”. 	<p>a=1</p>
13	<p>Core component 1</p> 	<p>CORE COMPONENT 1</p> <ul style="list-style-type: none"> • Refer to handout 1 and ask one of the attendees to read out Core component 1. • Here, essentially, participants will be told how crucial is to have an overall vision as documented in the IPC programme about what, where, how, and when the different components should interact, progress, be supported, etc. • Note how there is clear and robust evidence of the importance to have dedicated resources allocated to IPC 	<p>Handout 1</p>

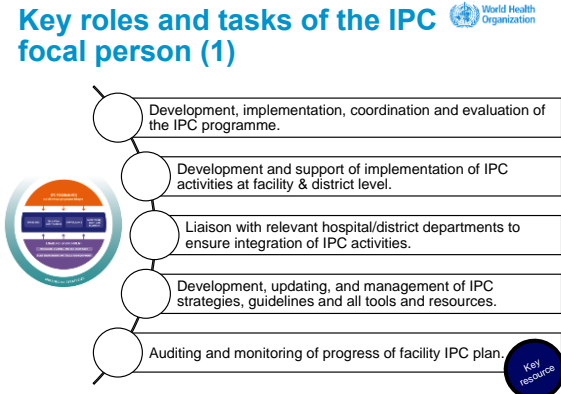
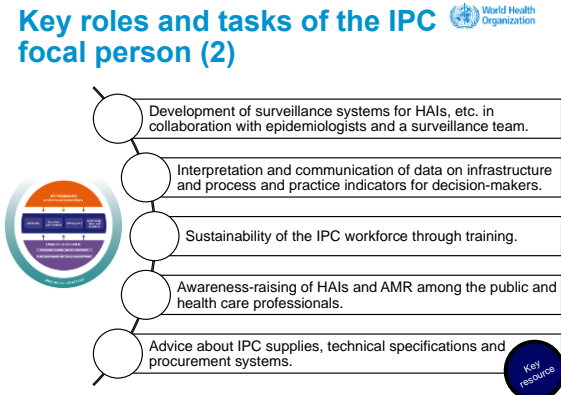
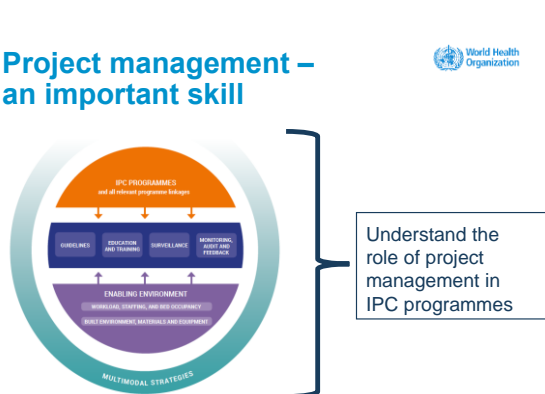
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>programmes.</p> <ul style="list-style-type: none"> • <i>NB – no need to go into detail on the orange evidence text – but it is presented for reference.</i> 	
14	<p>Core component 2</p> 	<p>CORE COMPONENT 2</p> <ul style="list-style-type: none"> • Refer to handout 1 and ask one of the attendees to read out Core component 2. • Mention how it is important not just to develop and release guidelines, but to ensure that there are mechanisms to educate healthcare workers about the guideline content and ensure concordance with guideline recommendations. 	Handout 1
15	<p>Essential guidelines</p> <p>The following are considered essential according to the core components</p> 	<p>ESSENTIAL GUIDELINES</p> <p>Explain that the guidelines highlight these guidelines as the “must-do” IPC guidelines.</p>	
16	<p>Core component 3</p> 	<p>CORE COMPONENT 3</p> <ul style="list-style-type: none"> • Refer to handout 1 and ask one of the attendees to read out Core component 3. • Highlight that the guideline recommendation refers to pre-graduate, postgraduate and in-service training. • And that an evaluation of the impact of training should take place. <p>And highlight the importance of</p>	Handout 1





	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
17	<p>Core component 4</p> 	<p>collaboration with local academic institutions.</p> <p>CORE COMPONENT 4</p> <ul style="list-style-type: none"> Refer to handout 1 and ask one of the attendees to read out Core component 4. <p>Mention that surveillance must be paired with timely feedback to influence improvements.</p>	Handout 1
18	<p>Core component 5</p> 	<p>CORE COMPONENT 5</p> <ul style="list-style-type: none"> Refer to handout 1 and ask one of the attendees to read out Core component 5. 	Handout 1
19	<p>Multimodal strategies Handout 3</p> <p>Refer to handout 3 in the student handbook</p>  <p>Interim Practical Manual supporting national implementation of the WHO guidelines on core components of infection prevention and control programmes. Geneva: World Health Organization; 2017.</p>	<p>MULTIMODAL STRATEGIES</p> <ul style="list-style-type: none"> Explain that the IPC focal person must be able to clearly articulate how the multimodal strategy applies to all IPC activities. This diagram summarizes the multimodal strategy. Ask five different attendees to read through each of the five elements of the strategy. <p>Say that we will continually refer to the multimodal strategy during the module.</p>	Handout 3

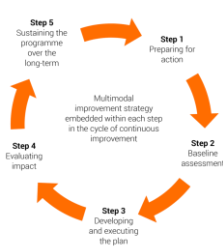
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
20	<p>The multimodal strategy in real life</p> <p>Consider the following scenario</p> <ul style="list-style-type: none"> • A hospital launches a training programme on safe disposal of used needles. • All HCWs are educated (teach it), posters are placed on the walls (sell it) and regular audits are introduced (check it). • But procurement of sharps bins is problematic, supplies regularly run out (build it) and the hospital management are not committed to regularly reviewing audit results (live it) . <p><small>2702218</small></p> <div style="text-align: center;">  <p>Will the strategy work?</p>   </div>	<p>THE MULTIMODAL STRATEGY IN REAL LIFE</p> <ul style="list-style-type: none"> • Ask students to consider a scenario where only part of the multimodal strategy is addressed. • Imagine a hospital that launches a training programme on safe disposal of used needles – all health care workers are educated (teach it), posters are placed on the walls in wards (sell it) and regular audits are introduced (check it). But the procurement of sharps bins is problematic and supplies regularly run out (build it). In addition, the hospital management are not committed to regularly reviewing audit results (live it). Ask students to discuss in their groups. • Within groups, ask students to discuss and write down whether they think this strategy will work and the reasons for their answer. <p>The key issue to highlight is that although a number of elements of the multimodal strategy have been addressed, system change (build it), that is, the availability and access to sharps bins, has not been reliably addressed and so the training and reminders and audits will not result in behaviour change because health workers cannot “do the right thing”, that is, safely dispose of the sharps. In addition the safety</p>	<ul style="list-style-type: none"> • 5 minutes for discussion and 5 minutes for selective feedback from two groups


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		culture/safety climate is not in place – the hospital managers do not value sharps safety.	
21	<p>Core component 6</p>  <p>• To achieve behaviour change or other process modification.</p> <p>• To document progress and impact.</p>	<p>CORE COMPONENT 6</p> <ul style="list-style-type: none"> Refer to handout 1 and ask one of the attendees to read out Core component 6. Mention that the monitoring and audit have to be coupled with timely feedback to increase adherence to good practice. 	Handout 1
22	<p>Core component 7 (facility)</p>  <p>• Standards for bed occupancy: one patient per bed with adequate spacing between beds.</p> <p>• HCW staffing levels should be adequately assigned according to patient workload.</p> <p>• Overcrowding recognized as a public health issue that can lead to disease transmission.</p>	<p>CORE COMPONENT 7</p> <ul style="list-style-type: none"> Refer to handout 1 and ask one of the attendees to read out Core component 7. 	Handout 1
23	<p>Core component 8 (facility)</p>  <p>• Appropriate clean and hygienic environment, water, sanitation and hygiene (WASH) services and materials and equipment for IPC, in particular for hand hygiene.</p>	<p>CORE COMPONENT 8</p> <ul style="list-style-type: none"> Refer to handout 1 and ask one of the attendees to read out Core component 8. 	Handout 1



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
24	<p>The core components at-a-glance</p>  <p>World Health Organization</p>	<p>CORE COMPONENTS AT A GLANCE:</p> <ul style="list-style-type: none"> This is a transition slide to re-show the core components visual and to highlight that implementation of the core components is supported by multiple resources and tools. Stress how IPC focal persons must embrace the variety of technical and non-technical, clinical, social, human, managerial and advocacy skills required to provide comprehensive and sustained support to the implementation of the core components. By doing this, patients have a better chance of a harm-free hospital experience. 	Handout 2
25	<p>Implementation resources</p>  <p>World Health Organization</p> <p>http://www.who.int/infection-prevention/tools/core-components/en/</p>	<p>IMPLEMENTATION RESOURCES</p> <ul style="list-style-type: none"> Talk through the key implementation resources. <ul style="list-style-type: none"> The practical manuals for implementation nationwide and at the facility. Baseline assessment tools to guide where to prioritize action. Academic publications on the guidelines to convince senior managers and leaders. The advocacy video shown earlier. 	<p>Practical manual (national) http://www.who.int/infection-prevention/campaigns/clean-hands/cc-implementation-guideline.pdf?ua=1</p> <p>Core component academic article https://aricjournal.biomedcentral.com/articles/10.1186/s13756-016-0149-9</p> <p>Advocacy video https://www.yout</p>

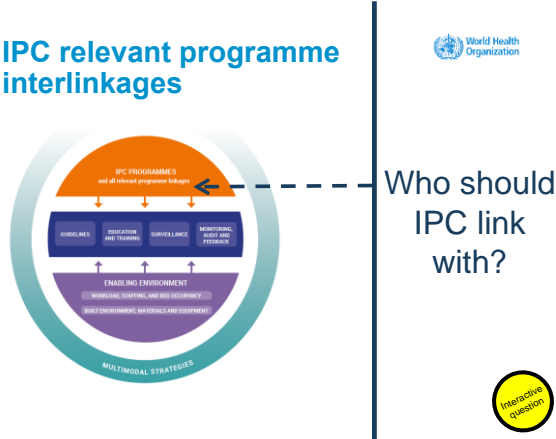
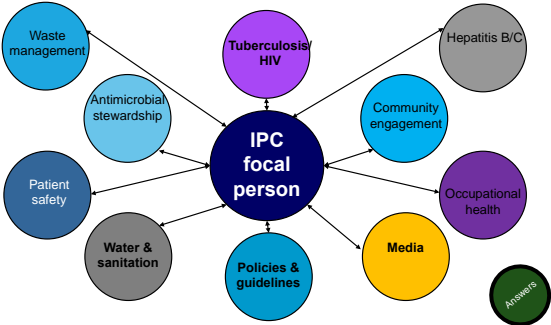
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<ul style="list-style-type: none"> An advocacy video on IPC, HAI and antimicrobial resistance. 	ube.com/watch?v=K-2XWtEjfl8&app=desktop
26	<p>Key roles and tasks of the IPC focal person (1)</p> 	<p>KEY ROLES AND TASKS OF THE IPC FOCAL PERSON (1)</p> <ul style="list-style-type: none"> Read through each bullet point to bring to life the diverse roles and tasks of an IPC focal person. 	
27	<p>Key roles and tasks of the IPC focal person (2)</p> 	<p>KEY ROLES AND TASKS OF THE IPC FOCAL PERSON (2)</p> <ul style="list-style-type: none"> As above. 	
28	<p>Project management – an important skill</p> 	<p>PROJECT MANAGEMENT – AN IMPORTANT SKILL</p> <ul style="list-style-type: none"> It is important for an IPC focal person to understand the value of project management in IPC programmes. Leadership impacts on the success of projects and effective project management supports a leader in getting things done! 	

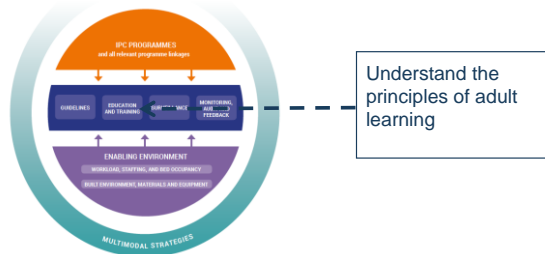
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
29	<p>Project management and IPC programmes</p> <ul style="list-style-type: none"> • A successful IPC programme can be enhanced through understanding the principles of project management. • Projects have to be delivered on time, on budget and with a determined level of quality • They also require the collaboration of multiple professionals • IPC focal persons must be familiar with standard project management terminology and approaches, and recognize critical stages and risks in managing projects.  <p>But... what is a project?</p> 	<p>PROJECT MANAGEMENT AND IPC PROGRAMMES</p> <ul style="list-style-type: none"> • Read the slide. • Invite the students to think about a recent project in IPC they have led or taken part in. • Invite students to share what they consider to be the key features and risks involved in running a project. 	<ul style="list-style-type: none"> • Allow 5 minutes for the interaction. • Write the students' responses on flip chart.
30	<p>What is a project?</p> <p>A unique process consisting of a set of:</p> <ul style="list-style-type: none"> • Coordinated and controlled activities • With start and finish dates • Clear roles and responsibilities and delegation of tasks • Undertaken to achieve an objective • Conforming to specific requirements, including • Constraints related to time, cost, quality and resources  	<p>WHAT IS A PROJECT?</p> <ul style="list-style-type: none"> • Invite one of the students to read from the slide and compare the slide with the flip chart responses previously obtained. • Highlight the following aspects of a project that link with the role of an IPC leader. <ul style="list-style-type: none"> ○ Coordination of activities – involves excellent planning and communication and a clear vision – if an IPC leader does not communicate the ultimate project goal, it is difficult to ensure everyone will come on board and work effectively. ○ A clear start and end date requires attention to detail and an understanding of the bigger picture, that is, how IPC links in with the broader health care agenda. Project slippage is always a risk. 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<ul style="list-style-type: none"> ○ Clear roles and responsibilities and delegation – project management is about teamwork – being efficient with the resources available – getting the right people for the job – lack of role clarity is a risk. ○ Undertaken to achieve an objective – this fits in with the overall vision and mission of IPC – the core components. ● Time constraints are important – IPC does not take place in a vacuum – delivering a project on time could be critical in terms of the bigger picture, for example, collaborating with antimicrobial resistance and quality colleagues who are working to different timelines. 	
31	<p>Project management and implementation</p> <p>Step 3: developing and executing the plan</p>  <p>Developing and executing an action plan requires good project management skills:</p> <ul style="list-style-type: none"> • Agree timelines. • Consider budget and resource needs. • Establish monitoring mechanisms. • Consider risks to success. <p><small>World Health Organization</small></p>	<p>PROJECT MANAGEMENT AND IMPLEMENTATION</p> <ul style="list-style-type: none"> ● Explain that the implementation of the IPC core components requires robust project management. ● WHO has developed a five-step approach to implementation that is informed by project management principles. ● Highlight the importance of preparation and planning – the right people and resources, a clear goal and indicators, a step-wise 	


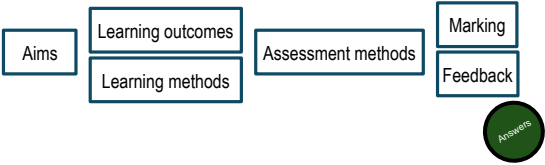


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>approach, clear allocation of roles and timeline to support implementation, and then the need to find out whether what you planned actually worked.</p> <ul style="list-style-type: none"> • Refer back to the key features of a project from the flip chart exercise - how do these five steps align with the students' thinking – what was missing in the information the students shared from their own experiences (if anything). • Also highlight that the heart of project management is communication and teamwork – and this will be covered more extensively later. 	
32	<p>Assessments and situation analysis as a key step of project management (steps 2 and 4)</p>  <p>Infection prevention and control assessment tool (IPCAT2)</p> <ul style="list-style-type: none"> • National-level assessment tool. • Provides baseline and ongoing data for improvement. <p>Infection prevention and control assessment framework (IPCAF)</p> <ul style="list-style-type: none"> • Facility-level assessment tool. • Provides baseline and ongoing data for improvement. <p>Hand hygiene self-assessment framework (HHSAF)</p> <ul style="list-style-type: none"> • Diagnostic tool for health care facilities. • Provides baseline and ongoing data for improvement. <p>http://who.int/infection-prevention/tools/core-components/en/</p>	<p>ASSESSMENTS AND SITUATION ANALYSIS AS A KEY STEP OF PROJECT MANAGEMENT</p> <ul style="list-style-type: none"> • Highlight the importance of assessing local indicators related to the processes, practices, infrastructures and outcomes relevant for the project in order to make a baseline situation analysis (step 2) and to assess impact and progress (step 4). • WHO has developed a range of IPC assessment tools, including an evaluation of the level of progress in implementing the core components at the national and facility level. 	<p>Refer to the hard copies (printed) of the IPCAT2, IPCAF and HHSAF.</p>






	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required																												
33	<p>Example: national level (step 3)</p>  <div data-bbox="188 674 443 1010"> <p>STEP 3: DEVELOPING AND EXECUTING AN ACTION PLAN</p> <p>MAIN ACTIVITIES</p> <p>1. Translate the findings of the baseline assessment into a written action plan (see link below to action plan template) by considering the following:</p> <ol style="list-style-type: none"> Using the results, identify priorities and SMART objectives (for example, "by 31 December 2019, at least one IPC focal person will be in place and have undergone a training programme in IPC") Identifying corresponding action steps and timeframes, including an agreed-upon schedule of reporting, to assess progress according to objectives Designating lead persons and support staff for each action as necessary </div> <ul style="list-style-type: none"> Conduct assessment to understand where your country stands on WHO IPC core components as well as current strengths/gaps. Use data to develop a specific, measurable, actionable, realistic and timely (SMART) action plan to be refreshed (bi-annually). Identify who needs to lead and be involved in the assessment. Remember to draw on existing relevant assessments, for example, HMIS/SARA, joint external evaluation (JEE), national AMR assessments, etc. Use results to provide actionable feedback to all stakeholders. Share with IPC team/committee, national leaders and decision-makers, other relevant programmes (can re-assess joint areas of work). Present results in a format suitable to each audience. <p><i>Interactive question</i></p>	<p>Example: national level (step 3)</p> <ul style="list-style-type: none"> Read the slide. State that this is an example from the national practical manual, step 3. Emphasize that the practical manuals are critical implementation resources – they should be the “go-to” resource for leaders in IPC. The manuals systematically address implementation of the core components. One of the key pieces of homework after completing the course is familiarizing themselves with the manuals. Now ask the students to spend a few to familiarize themselves with the practical manuals. 	5 minutes with 1-2 minutes for any feedback.																												
34	<p>An example of a structured IPC action plan</p>  <table border="1" data-bbox="188 1541 762 1787"> <thead> <tr> <th colspan="7">CORE COMPONENT- INSERT NAME OF CORE COMPONENT-</th> </tr> <tr> <th>Priority gaps identified</th> <th>Action required</th> <th>Lead person</th> <th>Start date</th> <th>End date</th> <th>Budget (if applicable)</th> <th>Monitoring and evaluating implementation progress (include review/ completion dates)</th> </tr> </thead> <tbody> <tr> <td><List all gaps identified from baseline assessment and prioritized for action></td> <td><List the actions that are planned using information gathered as you work through the 8 steps of the implementation cycle></td> <td><List the lead person or group driving the action plan></td> <td><State when the action will start to be addressed></td> <td><Estimate the deadline for action to be completed, including periodic review dates if applicable></td> <td><Estimate the budget required to address the required actions></td> <td><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></td> </tr> <tr> <td>Gap 1:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>http://www.who.int/infection-prevention/campaigns/clean-hands/cc-implementation-guideline.pdf?ua=1</p> <p><i>Interactive question</i></p>	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 8 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>	Gap 1:							<p>AN EXAMPLE OF A STRUCTURED IPC ACTION PLAN</p> <ul style="list-style-type: none"> The practical implementation manual contains templates to help the user develop an action plan. Here you can see how the action plan is structured and how it supports the identification of roles, a start and end date, the budget requirements and the evaluation mechanisms. Before moving on to the next section – invite questions and reflections on project management. Is anyone willing to share 	5 minutes for reflection, feedback and sharing of experiences.
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	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>details of either a successful or not so successful project that they have been involved in?</p>	
35	<p>IPC relevant programme interlinkages</p> 	<p>IPC RELEVANT PROGRAMME LINKAGES</p> <ul style="list-style-type: none"> • Say: “The variety of skills, domains, areas, tasks and interconnections needed for implementing IPC means that IPC focal persons need to be collaborating, influencing, and working towards integration with a number of other programmes, perhaps even outside the health sphere (for example, education)”. • Ask the students to share who the IPC team should link with. 	5 minutes for brainstorm.
36	<p>Linkages with other programmes</p> <p>IPC focal person advocates for IPC across programmes</p> 	<p>LINKAGES WITH OTHER PROGRAMMES</p> <ul style="list-style-type: none"> • Ask one of the students to read out the linkages in the circles. • Once complete – ask: “Is there any other collaboration and/or integration, clinical or structural that may be missing from here?” • Admit that the list does not pretend to be exhaustive, so participants may mention several relevant additional programmes. 	





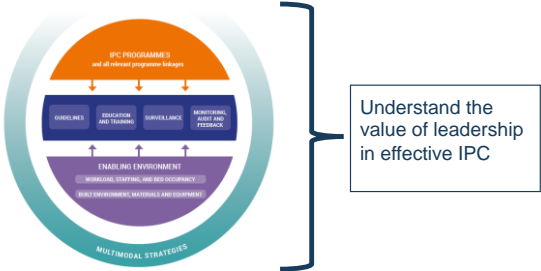
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
37	<p>Core components and the principles of adult learning</p>  <p>World Health Organization</p>	<p>CORE COMPONENTS AND THE PRINCIPLES OF ADULT LEARNING</p> <ul style="list-style-type: none"> • Training and education is one of the strong recommendations of the core component guidelines for health care facilities. • However, all the other components also feature an important aspect of the acquisition of new knowledge, behaviours and ways of doing things. • For example, for a surveillance programme to be successful, health care workers need to learn appropriate case definitions, reporting mechanisms, as well as sources of bias and error, etc. • And IPC focal persons not only need to support that learning, but also the learning of those who have to teach how to learn about the core components. • <i>[That sentence is there to make clear how this advanced package is not just about learning, doing and showing how to do, which are the classical clinical learning steps, but also how people need to learn how to teach.]</i> • Say: “Equally, teaching and learning are required for the successful implementation of multimodal behaviour change interventions”. • To be effective as a trainer, the IPC focal person should 	








	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>have a good understanding of the principles of adult learning.</p> <ul style="list-style-type: none"> This brief session addresses the principles of adult learning and will require more in-depth study for most students to develop into effective teachers. 	
38	<p>Understanding the principles of adult learning</p> <p>A key part of effective training and education</p> <ul style="list-style-type: none"> IPC is a discipline that requires specific knowledge acquisition. Educational interventions are crucial IPC quality improvement elements. IPC focal persons must be able to support educational interventions and therefore be familiar with pedagogical approaches. Implementation, adaptation and innovation in IPC practice require constant learning. <p>World Health Organization</p> <p>What expertise do we have in the room?</p> <p>Interactive question</p>	<ul style="list-style-type: none"> Read the slide – this contains very important points. It is highly likely that a number of students will routinely train others on IPC. Some may have undergone train-the-trainer courses, some may even have completed more advanced teaching courses – it is important to find out what the level of expertise is in the room. Ask: “Have any of you undertaken any sort of course to be a teacher or a trainer, for example, a train-the-trainer course?” Depending on responses, ask two students to elaborate on their experience. 	
39	<p>Application to the real world</p> <p>World Health Organization</p> <p>Think of a recent learning experience</p> <ol style="list-style-type: none"> What were the aims and outcomes – were they clear? What methods were used to help you learn - how were you encouraged to participate? How were you assessed? How did you evaluate your experience? What feedback was provided to support your learning? <p>Interactive question</p>	<ul style="list-style-type: none"> Now ask all students to think of a recent learning experience where they have been a student. Ask participants to reflect upon the questions on the slide and share with the group. 	2-3 minutes maximum on this activity.







	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
40	<p>Developing an educational intervention in IPC</p>  <p>Key considerations</p> <ul style="list-style-type: none"> • Identify aims and what the learners will learn (outcomes). • Consider learners' preferences and adapt methods. • Prepare assessment (evaluation) methods that reflect a variety of outcomes and learners. • Offer feedback to signpost achievement and progress. 	<ul style="list-style-type: none"> • Say: “The process to develop an educational intervention starts with the educational aims, identifies the learning outcomes, implements learning methods that fulfil those outcomes, uses assessment methods that reflect the variety of domains that students have to achieve, and includes marking criteria that are fair and offer routes for improvement”. • However, and this is an important point – training and education in isolation are not enough to support implementation of an improvement intervention and will not result in the desired change in behaviour. • Remember – training and education is just one of the five parts of the multimodal strategy – you also need to build it, check it, sell it and live it! 	
41	<p>Supplementary information is available for home reading</p>  <p>Refer to student handbook</p> <ul style="list-style-type: none"> • David Kolb’s theory of adult learning. • Tailoring your teaching to different situations. • Teaching approaches for IPC.  <p><small>Kolb D. Experiential learning: experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall, Inc.; 1984.</small></p>	<ul style="list-style-type: none"> • Highlight here that we have provided supplementary information on adult learning theories, tailoring teaching to different situations and teaching approaches that can be used for IPC training. • Students are advised to read through this supplementary information in the student handbook as a homework exercise to introduce some additional principles that will support 	Refer to student handbook: adult learning – supplementary information.



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>their role as educators.</p> <ul style="list-style-type: none"> • Conclude by saying that becoming an effective trainer and educator is a significant undertaking – this is just a taste of the key principles. 	
42	<p>Leadership saves lives!</p> <p>Effective leadership and influence in IPC saves lives</p> <p>You play a critical role in supporting and stimulating the right action at the right time to:</p> <ul style="list-style-type: none"> • Support the development of an effective IPC programme. • Support the implementation of the core components of IPC programmes in your facility. • Contribute to a reduction in HAI and AMR. • Run effective projects. • Link with other relevant programmes. • Train the health workforce effectively. <p>We need to influence doctors, nurses, managers and leaders and all disciplines in health care!</p> 	<ul style="list-style-type: none"> • Conclude the session by reading the slide. • Invite questions. 	
43	<p>Further reading on IPC programmes</p>  <p>WHO (2016). Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level. http://apps.who.int/iris/bitstream/10665/251730/1/9789241549929-eng.pdf?ua=1</p> <p>WHO (2009). A guide to the implementation of the WHO multimodal hand hygiene improvement strategy. http://apps.who.int/iris/bitstream/10665/70030/1/WHO_IER_FSP_2009.02_eng.pdf</p> <p>Zingg W, et al. Hospital organisation, management, and structure for prevention of health-care-associated infection: a systematic review and expert consensus. <i>Lancet Inf Dis.</i> 2015;15(2):212–224.</p> <p>WHO (2009). A guide to the implementation of the WHO multimodal hand hygiene improvement strategy. http://apps.who.int/iris/bitstream/10665/70030/1/WHO_IER_FSP_2009.02_eng.pdf</p> <p>Saint S, et al. The importance of leadership in preventing healthcare-associated infection: results of a multisite qualitative study. <i>Infect Control Hosp Epidemiol.</i> 2010;31(9):901-907.</p> <p>Storr J, et al. Redefining infection prevention and control in the new era of quality universal health coverage. <i>J Res Nursing.</i> 2016;21(1) 39–52.</p> 	<ul style="list-style-type: none"> • No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	
44	<p>Further reading on project management</p>  <p>WHO (2004). Planning and implementation of district health services. http://www.who.int/management/district/planning_budgeting/PlanningImplementationDHSFROMd4.pdf?ua=1</p> <p>WHO (2007) A guide for fostering change to scale up effective health services. http://www.who.int/management/AGuideFosteringChangeScalingUpHealthServices.pdf</p> <p>ISO 10006:2017. Quality management -- guidelines for quality management in projects. https://www.iso.org/standard/70376.html</p> <p>UNICEF/UNDP/World Bank/WHO (2005). Effective project planning and evaluation in biomedical research. http://apps.who.int/iris/bitstream/10665/69237/2/TDR_RCS_PPF_05.2_eng.pdf?ua=1</p> 	<ul style="list-style-type: none"> • No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	

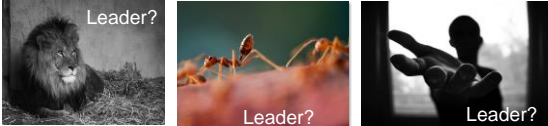

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
45	<p>Further reading on adult learning</p>  <p>Anderson P, et al. Teaching infection prevention using concept mapping learning strategies. Am J Infect Control. 2016; 41(6):S58.</p> <p>Koo E, et al. Making infection prevention education interactive can enhance knowledge and improve outcomes: results from the Targeted Infection Prevention (TIP) study. Am J Infect Control. 2016;44(11):1241–1246</p> <p>NHS Education for Scotland. Qualitative analysis of learning needs in infection prevention and control (IPC) staff. http://www.nes.scot.nhs.uk/media/3957464/ipc_tna_report_final.pdf</p> <p>Kolb D. Experiential learning: experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall, Inc.; 1984.</p> 	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	
46	<p>Session 2:</p>  <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Becoming an IPC leader</p> </div> <p>An exploration of what makes an effective leader.</p>	<ul style="list-style-type: none"> Session 2 now drills into leadership and starts to explore what makes an effective leader. 	
47	<p>Competencies</p>  <ul style="list-style-type: none"> Communicate a vision of IPC that aligns organizational and workforce priorities. Foster and support collaborative and effective individual, team and organizational IPC performance. Use relevant quality improvement approaches to increase individual, team and organizational IPC performance. Develop a comprehensive, evidence-based strategy for effective IPC services. 	<ul style="list-style-type: none"> Read the slide or invite a student to read the slide. 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
48	<p>Learning objectives</p>  <ul style="list-style-type: none"> • Define leadership. • Describe the influence of leadership on selected IPC outcomes. • Identify different domains of leadership in the literature. • Discuss a variety of leadership styles. • Reflect upon such styles and apply them to their own leadership style and personality. 	<ul style="list-style-type: none"> • Read the slide or invite a student to read the slide. 	
49	<p>Key points</p>  <ul style="list-style-type: none"> • Robust leadership in IPC is essential for effective decision-making, efficient use of resources and the provision of high-quality, safe, effective, person-centred care. • Strong leadership supports activities to prevent and control infection within the organization, in particular by catalyzing participation and motivation among local teams, and is essential to achieve reduction of patient harm due to HAIs and AMR. • Leadership must be aligned – from the hospital management team to the executive and specialist infection control team, to clinical and non-clinical staff. 	<ul style="list-style-type: none"> • Read the content of the slide to the participants. • Ask: “In your opinion, is there anything missing from this rationale about how important leadership is in IPC?” 	<p>3 minutes to think and express opinion. Do not get involved in a lengthy debate, but allow two responses. If participants are not forthcoming, just congratulate them that they agree with the content!</p> <p>Write down on whiteboard/pad if available.</p>
50	<p>Leadership - a critical success factor</p>  	<ul style="list-style-type: none"> • Building on session 1, emphasize that an understanding of the value of leadership is important in the context of implementing an IPC programme and all of its components. 	



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
51	<p>What would a great IPC leader look like?</p> <p>Write down what you think are the top three things that a great IPC leader does to demonstrate their leadership.</p> <p><i>No right or wrong answers!</i></p>   	<p>ICEBREAKER</p> <ul style="list-style-type: none"> Working in pairs, ask students to discuss and agree what they think are the top three things/characteristics that a great IPC leader would do to demonstrate their leadership. By 'great' – we mean what a "role model" IPC leader would do (characteristics/traits that would mark them out as a leader). The example provided to get them thinking is that a great IPC leader would be a good communicator. Emphasize that there is no right or wrong answer. Ask them to write at least three things on a piece of paper. 	<p>5 minutes to write down the three things. 10 minutes for group feedback. Collect the paper from each pair (this can be used later to make a collage of "great IPC leaders" that can be photographed and shared with the students as a record of their thoughts on leadership. They can reflect at the end of the module whether they would change any of their thoughts.</p>
52	<p>IPC leadership worldwide</p>    	<ul style="list-style-type: none"> Play the video explaining the concept of IPC leadership in the words of IPC practitioners from around the world. Ask students to listen carefully and write down as many of the key leadership-related words they hear being discussed by IPC focal persons around the world. Invite students to share their words and write on flip chart. Say: "We will build on this for the rest of the session". 	<p>Video: http://www.who.int/infection-prevention/tools/core-components/en/</p> <p>5 minutes to discuss key leadership-related words.</p> <p>Repeat the video showing the version WITH THE LEADERSHIP WORDS</p>




	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
53	<p>Leadership - what are we talking about?</p>  <p>Leadership describes the ability to:</p> <ul style="list-style-type: none"> - influence - motivate and - enable  <p>members of an organization to contribute to the effectiveness and success of the organization.</p> <p><small>House R.J. et al. Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. J World Business, 2002;37(1): 3-10.</small></p> 	<ul style="list-style-type: none"> • Say: “There have been many definitions of leaders and leadership in many fields, but one that seems particularly fitting is this one from House et al”. • Read the definition. • Then say: ”Note that this definition emphasizes ‘soft’ skills such as influencing, persuading, motivating, encouraging, enabling, facilitating, etc. Equally, it focuses on the members of a given organization, and the ultimate outcome is effectiveness”. • Check how this definition matches with the students’ examples of what a brilliant IPC leader would look like. • Ask participants: “Do you agree with this definition?” If any participant disagrees, ask why. Take note of the reasoning, but suggest that the group should wait until the end of the session to find out. • Move to next slide. 	<p>Allow 1-2 minutes for people to agree or disagree. If any participant disagrees with this vision, ask why.</p>
54	<p>Leadership - what are we talking about?</p>  <p>The ability to influence, motivate, enable...</p> <div data-bbox="204 1675 743 1800" style="border: 1px solid black; padding: 5px;">  <p>The implementation of guidelines into practice</p> </div> <div data-bbox="204 1816 743 1942" style="border: 1px solid black; padding: 5px;">  <p>Behaviour change through multimodal strategies</p> </div>	<ul style="list-style-type: none"> • So we are saying that in IPC leadership relates to the ability to influence, motivate and enable (all what are considered “soft” skills) continuous improvement in IPC – in fact – in the implementation of an entire IPC programme and all its components – this is a big deal! • Say: “Remember, as we saw in the previous 	<p>Keep the core component visual and the multimodal strategy visual (see the student handbook – handouts 2 and 3) to stimulate discussion as well as reinforcement.</p>


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>module, key leadership aims and actions in IPC would be to influence, motivate and enable in each of the areas covered by the multimodal strategy. And essentially applying the leader's influence, motivation and enablement to build (a team, an organization), teach (about IPC and to others), check (making sure you and your organization is doing the right thing at the right time etc., and you tell everybody how well they are doing), sell (keep others interested in excellent IPC) and live it (simply, that engagement with excellent IPC is embedded across your organization and at all levels of performance and professionals)".</p>	
55	<p>What is the relation between leadership and effective IPC?</p>  <ul style="list-style-type: none"> • Leaders in close and regular contact with clinical teams in wards and units positively influence quality of care. • Leaders support others to develop, implement and evaluate their own solutions to problems. • Leadership associated with improved practices for hand hygiene, gowning and gloving. • Staff engagement and hospital leadership are significantly associated with knowledge related to IPC. (Sinkowitz-Cochran et al, 2011)¹ • Positive leadership behaviours are associated with a reduced incidence of pneumonia and urinary tract infections. (Houser, 2003)² <p><small>¹Sinkowitz-Cochran RL, et al. The associations between organizational culture and knowledge, attitudes, and practices in a multicenter Veterans Affairs improvement initiative to prevent methicillin-resistant <i>Staphylococcus aureus</i>. Am J Infect Control. 2012;40(2):138-143. ²Houser J. A model for evaluating the context of nursing care delivery. J Nurs Adm. 2003;33(1):38-47.</small></p> 	<ul style="list-style-type: none"> • Ask one of the students to read the slide. • Then say: “As highlighted already, leadership means, ultimately, effectiveness and successful outputs and outcomes. Specifically in IPC, there is already growing evidence about the impact that leaders and leadership can have on IPC-related outcomes. • The evidence in the literature seems to be telling us that leadership is truly about making something happen. • For example, as we have just heard - studies have 	

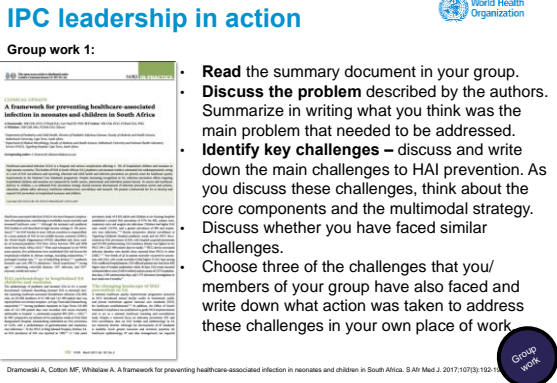
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>found a positive association between leadership and hand hygiene compliance and optimal hand hygiene behaviour, or knowledge related to IPC by leadership increasing staff engagement. Such increased knowledge can also influence IPC-related clinical outcomes, such as different HAIs.</p> <ul style="list-style-type: none"> For example, in the paper by Sinkowitz-Cochran, surveyed staff valued the support and help provided by leaders to implement their own solutions to improve the quality of patient care, as well as the recognition of ideas generated from staff to improve the quality of patient care.” Relate and link this back to the students own “brilliant IPC leaders” list. 	
56	<p>Characteristics of a leader</p> <p>In your opinion, who is a leader?</p>  <ul style="list-style-type: none"> What are the traits/features of a leader that you know (in real life or a celebrity, politician, sports person)? – which of these do you have as well? How does thinking about that particular person make you feel? <p><small>©CCO Public Domain. Free for personal and commercial use. No attribution required. ©CCO License. Free for personal and commercial use. No attribution required.</small></p> 	<ul style="list-style-type: none"> Say: “So you have seen the impact that an effective leader can have on IPC outcomes. Thus, the decisions, behaviour and actions of leaders appear to be essential”. We heard at the start of this session what you think are the characteristics of a brilliant IPC leader. Let us now try and connect this with leadership theory. Link the next part to the list of “brilliant IPC leaders” list if possible. Say: “In your opinion, is a 	<p>Allow 1-2 minutes for people to agree or disagree with</p>



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>leader someone strong, decisive, one of a kind in each organization, observing from a distance, just getting involved in key moments and superior to other members of the organization?” (Participants can see the lion, so do not mention it.)</p> <ul style="list-style-type: none"> • Say: “Or is a leader more like a peer within a given organization, simply carrying out a specialized role, who can be and frequently is, replaced by other people, focused on the task or outcome rather than the person?” • Say: “Or is a leader someone who asks for help as much as provides help, connecting people and assets within the organization?” • Ask participants: “With these examples in mind, talk to the person next to you – can you think of a person, either someone you have worked with or a celebrity, a politician or sports person who you would say is a leader – why do you think so – that is, what are the traits and features of that person that defines them as a leader (in your opinion)? Write down these traits.” • Follow with: “Once you have identified someone and discussed their traits, think whether you have any 	<p>each of the lion, ant, outstretched hand leader explanations. If any participant disagrees with this vision, then ask them why. Do not get into convoluted discussion, simply allow participants to express their point of view.</p> <p>Allow 5 minutes so each participant can talk with someone else.</p> <p>This allows for self-reflection and will link up with the self-assessment. Allow 5 minutes for feedback – write on flipchart.</p>




	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>or all of those traits. Once you have thought about yourself, make a note of those traits that you have (or think you have!).”</p>	
57	<p>Characteristics of an IPC leader</p>  <p>World Health Organization</p> <ul style="list-style-type: none"> Leaders foster a culture of excellence. Leaders develop an organizational vision. Leaders focus on previewing and resolving challenges that could be opportunities to improve. Leaders inspire, encourage, and motivate others. <p>Key resource</p>	<ul style="list-style-type: none"> Say: “Generally, leaders have been identified by their personality, their behaviour and their actions, or how they deal with themselves, with others, and with the projects they lead”. “Specifically in IPC, the characteristics of leaders have been proposed as including the fostering of a culture of excellence; the development and communication of a vision about the organization; and their previewing and anticipation of problems. Clearly, these ideas may be applicable to leaders in any field.” “It is important to bear in mind that ideas or perceptions of leaders and leadership will be shaped by the overall culture and norms of the society.” 	
58	<p>Situational leadership</p> <p>Adaptable leaders</p> <ul style="list-style-type: none"> Situational leaders adapt their leadership style to situations. Leadership 'based on a relationship between the leader's supportive and directive behaviour, and between the follower's level of development'. (Grimm, 2010) Leader's support requires personal involvement, sustained communication and emotional support. Leader's direction refers to the steering provided by the leader as well as the allocation of follower roles.  <p>World Health Organization</p> <p>Interactive question</p>	<ul style="list-style-type: none"> Say: “But different types of leaders and leadership have been proposed in the leadership literature, despite the generic set of personality, behaviour and actions that characterize leaders”. Ask a student to read the slide. Then say: “So in terms of characteristics, situational 	<p>After describing this type of leadership, ask the participants whether they can think of any leader they have met or can think of who would mainly exercise these situational</p>




	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>leaders are fluid and are able to adapt their leadership to a given situation.</p> <ul style="list-style-type: none"> • But not only to the situation, but also to the resources available, the strengths and weaknesses of the human resources, etc. • Such flexibility demands a solid relationship between leaders and followers where leaders will be willing, and interested to invest time and energy communicating and providing support.” • In situational leadership, the context shapes how the leader behaves – the leader adapts their style to the context they find themselves in – many politicians display characteristics of situational leaders. Surgeons could also fall into this group. 	<p>characteristics. Allow 2 minutes, if any of the participants nods in agreement ask him/her to describe. 2 minutes only for this interaction.</p>
59	<p>Transformational leadership</p> <p>Visionary leaders</p> <ul style="list-style-type: none"> • They have and share a vision for what an organization should be. (Sims, 2009) • They develop others to exceed their own self-interests for a higher purpose. (Vinkenburg et al, 2011) • Leader-follower relationships are based on interactions or exchanges. (Rolfe, 2011)    <p><small>CC0 Public Domain, Free for personal and commercial use. No attribution required. CC0 License, Free for personal and commercial use. No attribution required.</small></p>	<ul style="list-style-type: none"> • Ask a student to read the slide. • Say: “The transformational leader moves perhaps away a little from this relational and emotional aspect between leader and followers and thrives on developing and communicating a vision, as well as empowering followers to embrace such a vision”. • Transformational leaders motivate their followers – they appeal to their followers’ ideals and 	<p>After describing this type of leadership, ask the participants whether they can think of any leader they have met who would mainly exercise these transformational characteristics. Allow 2 minutes, if any of the participants nods in agreement ask</p>





	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>empower and inspire using their own beliefs and personal strengths.</p> <ul style="list-style-type: none"> • Transformational leaders have the ability to inspire change in their followers so that they are engaged to be more effective and engaged. • Famous transformational leaders include Martin Luther King Jr, Nelson Mandela, and religious leaders, but we also find transformational nurse and doctor leaders and you could develop into a transformational leader too! • [Move to next slide quickly] 	<p>him/her to describe. 2 minutes only for this interaction.</p>
60	<p>Transactional leadership</p> <p>Performance-oriented leaders</p>  <ul style="list-style-type: none"> • Empowered to evaluate, correct, and train subordinates. • Performance shaped by punishment or rewards. • Highly visible leader, top of 'chain of command'. • Motivation to be effective and efficient. <p><small>www.who.int (CCO Public Domain). Free for personal and commercial use. No attribution required. (CCO License. Free for personal use. No attribution required. No reuse allowed.)</small></p>	<ul style="list-style-type: none"> • Ask a student to read the slide. • So finally, the transactional leader is “much more focused on analytical aspects, such as evaluation, measurement, standardization, etc., aligned with performance, often driven from mandates from higher leaders in a hierarchical fashion, which is very much valued by the transactional leader”. • Transactional leaders function with a clear chain of command. Followers are motivated through rewards and punishments. Often, if followers fail to live up to their requirements they are punished! • Examples might include a military leader, a football coach – even hospital 	<p>After describing this type of leadership, ask the participants whether they can think of any leader they have met who would mainly exercise these transactional characteristics. Allow 2 minutes, if any of the participants nods in agreement ask him/her to describe. 2 minutes only for this interaction...</p>




	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>managers!</p> <ul style="list-style-type: none"> • Say: “So, after having learned from these broad types of leadership, what type of leadership fits in best with your personality and values? Discuss with participants around you and try to give a justification for your opinion based on an experience or example”. 	<p>Allow 5 minutes, so each participant can talk for about 2.5 minutes with someone else. After that time, ask if anybody would like to say a few words about their style. Ask people with different styles.</p>
61	 <p>IPC leadership in action</p> <p>Group work 1:</p> <ul style="list-style-type: none"> • Read the summary document in your group. • Discuss the problem described by the authors. Summarize in writing what you think was the main problem that needed to be addressed. • Identify key challenges – discuss and write down the main challenges to HAI prevention. As you discuss these challenges, think about the core components and the multimodal strategy. • Discuss whether you have faced similar challenges. • Choose three of the challenges that you/ members of your group have also faced and write down what action was taken to address these challenges in your own place of work. <p>Group work</p>	<p>Group work 1:</p> <ul style="list-style-type: none"> • Ask students to refer to the student handbook and turn to Group work 1 • Say: “As an example of the impact that a leader in IPC can have, you had this report from South Africa considering different components that were put in practice to improve HAIs. • Your first job is to discuss the problem described by the authors in your groups. Summarize in writing what you think was the main problem that needed to be addressed. • Then focus on identifying key challenges to HAI prevention. As you discuss these challenges, think about them as leadership opportunities and also think about the core components and the multimodal strategy. • Discuss whether you have faced similar challenges. • Choose three of the challenges that 	<p>Student handbook – group work 1 (for facilitator notes and answers see annex 2).</p> <p>Ensure that participants are in groups of no more than five to seven people, if possible.</p> <p>Allow 20 minutes to read the paper and answer the questions.</p> <p>15 minutes for feedback from each group.</p>


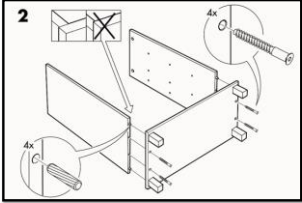

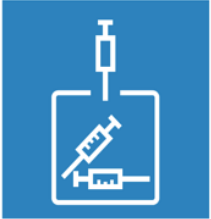

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required										
		<p>you/members of your group have also faced and write down what action was taken to address these challenges in your own place of work.”</p> <ul style="list-style-type: none"> • Emphasize during the plenary feedback session that by leadership opportunity, we mean the crucial points where IPC focal persons could have demonstrated any of the leadership skills to progress the project. Try to connect the leadership opportunities with the core components. • Move to the next slide when addressing challenges and how they were addressed in the paper. 											
62	<p>Group work 1 – how the authors addressed the challenges</p>  <table border="1" data-bbox="193 1272 754 1621"> <thead> <tr> <th>Challenge</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Policies and guidelines</td> <td> <ul style="list-style-type: none"> • IPC norms and standards for outpatient and inpatient settings developed. • IPC guidelines for paediatric/neonatal wards and clinics developed. </td> </tr> <tr> <td>Education, training and advocacy for patient safety</td> <td> <ul style="list-style-type: none"> • A national core curriculum on IPC for undergraduates developed. • In-service training for all HCWs initiated. • IPC champions to lead education, advocacy and research established. • Advocacy and buy-in from managers and departmental heads to prioritize safe care of children agreed upon. • Integration of IPC with existing structures, for example, quality improvement committees. </td> </tr> <tr> <td>Provisions and infrastructure</td> <td> <ul style="list-style-type: none"> • Building norms for new and renovated neonatal and paediatric services established. • Basic provisions for HAI prevention, for example, soap, water, alcohol-based handrub, personal protective equipment, agreed upon. </td> </tr> <tr> <td>Surveillance and research</td> <td> <ul style="list-style-type: none"> • Recommendations for HAI surveillance methods, frequency and targets implemented. • Outbreak reporting established. • Addition of HAI to existing morbidity and mortality registers. • Identification of key research questions to improve HAI implementation. </td> </tr> </tbody> </table> 	Challenge	Action	Policies and guidelines	<ul style="list-style-type: none"> • IPC norms and standards for outpatient and inpatient settings developed. • IPC guidelines for paediatric/neonatal wards and clinics developed. 	Education, training and advocacy for patient safety	<ul style="list-style-type: none"> • A national core curriculum on IPC for undergraduates developed. • In-service training for all HCWs initiated. • IPC champions to lead education, advocacy and research established. • Advocacy and buy-in from managers and departmental heads to prioritize safe care of children agreed upon. • Integration of IPC with existing structures, for example, quality improvement committees. 	Provisions and infrastructure	<ul style="list-style-type: none"> • Building norms for new and renovated neonatal and paediatric services established. • Basic provisions for HAI prevention, for example, soap, water, alcohol-based handrub, personal protective equipment, agreed upon. 	Surveillance and research	<ul style="list-style-type: none"> • Recommendations for HAI surveillance methods, frequency and targets implemented. • Outbreak reporting established. • Addition of HAI to existing morbidity and mortality registers. • Identification of key research questions to improve HAI implementation. 	<ul style="list-style-type: none"> • Here we have listed the challenges and how the authors addressed them. • Read through the slide. • At this point, invite groups to share their own challenges and how they tackled them. 	
Challenge	Action												
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	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
63	<p>Making improvement with limited resources</p> <p>Refer to student handbook</p> <ul style="list-style-type: none"> • Damani highlights three approaches to improve IPC in settings with limited resources: <ul style="list-style-type: none"> • focus on improving no-cost practices • focus on improving low-cost practices • stop wasteful and unnecessary practices. • These three approaches have the potential to save money, time and improve the quality and safety of health care. <p><small>Damani N. Simple measures save lives: an approach to infection control in countries with limited resources. J Hosp Infect. 2007;65(Suppl. 2):151-154.</small></p>   	<ul style="list-style-type: none"> • Depending on what emerges from the group feedback, it is likely that many people will recall challenges that seem insurmountable and most likely related to lack of resources, both human and financial/material. • Emphasize here that supplementary information highlighting three approaches to improve IPC in settings with limited resources is provided in the student handbook. These include: <ul style="list-style-type: none"> ○ focusing on improving no-cost practices; ○ focusing on improving low-cost practices; ○ stopping wasteful and unnecessary practices • These three approaches have the potential to save money, time and improve the quality and safety of health care – and could be introduced rapidly to make a big difference to patients. • Direct the students to read through the section in the student handbook and invite group discussion. Allow the discussion to flow and respond to any questions or disagreements. • Ask whether any of the students have tried to implement any of these approaches. 	<p>5 minutes to read the section on “Making improvement with limited resources” in the student handbook.</p> <p>5 minutes for group feedback.</p>


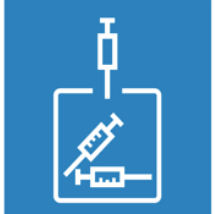


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<ul style="list-style-type: none"> As this session closes, thank everyone for their energy! 	
64	<p>Further reading & references</p>  <p>A guide to the implementation of the WHO multimodal hand hygiene improvement strategy. Geneva: World Health Organization; 2009. http://www.who.int/ops/5may/Guide_to_Implementation.pdf</p> <p>House RJ, et al. Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. J World Business. 2002;37(1): 3-10.</p> <p>Sinkowitz-Cochran RL, et al. The associations between organizational culture and knowledge, attitudes, and practices in a multicenter Veterans Affairs quality improvement initiative to prevent methicillin-resistant Staphylococcus aureus. Am J Infect Control. 2012;40(2):138-143.</p> <p>Houser J. A model for evaluating the context of nursing care delivery. J Nurs Adm. 2003;33(1):39e47.</p> <p>Yuki GA. Leadership in organizations global edition. Harlow (UK): Pearson Education Limited; 2013.</p> <p>Adair J. Action-centred leadership. New York, NY: McGraw-Hill; 1973.</p> <p>Saint S, et al. The importance of leadership in preventing healthcare-associated infection: results of a multisite qualitative study. Infect Control Hosp Epidemiol. 2010; 31(9): 901-907.</p> <p>Grimm JW. Effective leadership: making the difference. J Emerg Nurs. 2010;36(1):74-77.</p> <p>Crevani L, Lindgren M, Packendorff J. Leadership, not leaders: on the study of leadership as practices and interactions. Scand J Management. 2010;26(1):77-86.ims.</p> <p>Sims HP, Faraj S, Yun S. When should a leader be directive or empowering? How to develop your own situational theory of leadership. Business Horizons. 2009;52(2):149-158.</p>	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	
65	<p>Further reading & references</p>  <p>Vinkenburg CJ, et al. An exploration of stereotypical beliefs about leadership styles: is transformational leadership a route to women's promotion? The Leadership Quarterly. 2011;22(1):10-21.</p> <p>Rolle P. Transformational leadership theory: what every leader needs to know. Nurse Leader. 2011;9(2):54-57.</p> <p>Bass BM. The Bass handbook of leadership: theory, research, and managerial applications. Fourth edition. New York, NY: Free Press; 2008.</p> <p>Palmer R, Rayner H, Well D. Multisource feedback: 360-degree assessment of professional skills of clinical directors. Health Serv Manage Res. 2007;20(3):183-188.</p> <p>Goleman D. Leadership that gets results. Harvard Business Rev. 2000; March–April.</p> <p>Kets de Vries MF et al. Development and application of the leadership archetype questionnaire. Int J Human Res Manage.. 2010;21(15):2848-2863.</p> <p>Briggs I, Myers P. Gifts differing: understanding personality type. Mountain View, CA: Davies-Black Publishing; 1995.</p> <p>Carroll B, Ford J, Taylor S. Leadership. Contemporary critical perspectives. London: Sage Publications Ltd.; 2015.</p> <p>Damani N. Simple measures save lives: an approach to infection control in countries with limited resources. J Hosp Infect. 2007; 65(S1):151-154.</p>	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	
66	<p>Session 3:</p>  <div style="border: 1px solid black; padding: 10px; width: fit-content; margin-top: 20px;"> <p>Implementation strategies and behavioural change</p> </div>	<ul style="list-style-type: none"> Now in this session, we will turn our attention to implementation strategies and behaviour change. 	


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
67	<p>Competencies</p>  <ul style="list-style-type: none"> Describe key IPC implementation strategies including considerations of behavioural change, system change, multimodal strategies and campaigning. Lead the development and implementation of behavioural components related to IPC programmes. Evaluate the effectiveness of behavioural interventions and components related to an IPC programme. 	<ul style="list-style-type: none"> Read the slide or invite a student to read the slide. 	
68	<p>Learning objectives</p>  <ul style="list-style-type: none"> Define implementation as well as implementation science. Describe factors supporting successful implementation of interventions. Recognize implementation components in available WHO materials. Critique experiences reporting on implementation of IPC interventions. Be familiar with individual, team, organization and societal factors influencing implementation. 	<ul style="list-style-type: none"> Read the slide or invite a student to read the slide 	
69	<p>Key points</p>  <p>The WHO core components are a road map to indicate how IPC can effectively prevent harm due to HAI and AMR.</p> <p>Implementation, including effective leadership, is key to translate guidelines into practices.</p> <ul style="list-style-type: none"> Not always easy and takes time. Multimodal/multidisciplinary strategies support implementation (monitoring approaches; patient-centred; integrated within clinical procedures; innovative and locally adapted; tailored to specific cultures and resource level). Understanding quality improvement methodology is important. 	<ul style="list-style-type: none"> Read the slide. Emphasize that implementation science (including the role of behaviour change theories) and quality improvement (QI) are two disciplines in their own right Today's session is a rapid outline of these critical aspects of successful IPC. 	

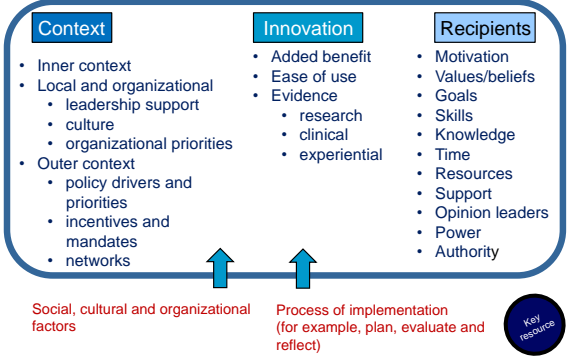
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
70	<p>Implementation and behavioural change strategies</p> <p>Why these are important for successful IPC</p> <p>Quality improvement interventions in IPC require individual, team and organizational behaviour change.</p> <p>Understanding cultural, behavioural, organizational and clinical factors influencing behaviour change is essential for the successful implementation of guidelines and interventions.</p> <p>Several psychological frameworks have been used to understand how the different factors interplay.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; width: 150px;">  <p>The implementation of guidelines into practice</p> </div> <div style="border: 1px solid black; padding: 5px; width: 150px;">  <p>Behaviour change through multimodal strategies</p> </div> <div style="border: 2px solid yellow; border-radius: 50%; padding: 5px; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; color: black; font-size: 8px;"> Interactive question </div> </div> 	<ul style="list-style-type: none"> • Say: “Understanding implementation science is key to translate the core components from guideline to reality. • It is essential that as IPC is a practical discipline underpinned by clinical and social sciences, IPC focal persons have got the skills that allow them to apply the recommendations and requirements from the policy to the real clinical world. Implementation science is therefore a key tool for such translation”. • Ask whether any of the students have been involved in a quality improvement initiative or other implementation projects either involving IPC or another field – it is highly likely that this may be the case. • If students share their experiences, take some time to hear what they have to say and any key lessons learned – probe: what was the intervention or topic being addressed and what methods were used? Prompt by asking whether students have used/are familiar with Plan-Do-Study-Act (PDSA) cycles. 	5-10 minutes sharing of experiences


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
71	<p>What do we mean by 'implementation'?</p>  <p>Implementation is the translation of research evidence into clinical, organizational, professional practice. (Ferlie, 2000)</p>  <p><small>Ferlie E, Fitzgerald L, Wood M. Getting evidence into clinical practice: an organisational behaviour perspective. J Health Serv Res Policy. 2005;5(2):96-102.</small></p>	<ul style="list-style-type: none"> • Read the slide • You could say: “Think of implementation as the process of building something, following instructions • The research evidence tells us what we need to do (like the assembly instructions), but we need to follow a process, use tools, have prior skills, use materials, and may need help from someone, and there may be a need also to make minor modifications, etc.)”. 	<p>Ask participants if they agree with this definition. Allow for 3 minutes of open debate.</p>
72	<p>What is required for successful implementation?</p>  <div data-bbox="183 1355 432 1630" style="border: 1px solid blue; border-radius: 15px; padding: 10px;"> <p>Context</p> <ul style="list-style-type: none"> • Inner context • Local and organizational <ul style="list-style-type: none"> • leadership support • culture • organizational priorities • Outer context <ul style="list-style-type: none"> • policy drivers and priorities • incentives and mandates • networks </div>  <p>How does an understanding of context help implement a sharps safety improvement?</p> 	<ul style="list-style-type: none"> • It is important to understand that whenever we plan to implement any intervention to improve the quality and safety of patient care, many things influence the likelihood of success. • Let’s start with the context. Understanding the “context” in which the intervention is to be implemented is essential. • Context refers to internal as well as external factors. • Internal or “inner” contextual factors influencing implementation can act as both barriers or facilitators. • Some seem quite obvious, such as leadership support, which we have seen in the previous session. This is the “live it” element of the multimodal strategy. If an influential leader does not support the intervention 	<p>Allow 5 minutes for groups to brainstorm the inner and outer contexts related to sharps safety.</p> <p>Allow 5 minutes for feedback</p>

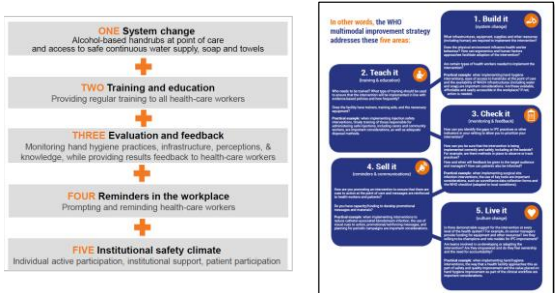

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>that you're trying to implement, then success will be hard.</p> <ul style="list-style-type: none"> • Other factors related to leadership include the culture and the priorities of an organization. • In relation to the external or “outer” context, this is all about factors outside of a hospital or clinic or district medical centre that influence implementation. • This can include government priorities (policies), political incentives or punishments such as fines, the existence of networks, especially community and civil society lobby groups and activists. • The WHO core components (and other WHO guidelines) are a good example of an international standard. Externally prepared, but mandated by governments to be followed in many countries. The presence of a WHO guideline can be a positive outer context driver to support implementation by giving credibility and helping to win the hearts and minds of those who need to implement them. • Say: "So, if you were thinking about ways of reducing sharps injuries and promoting injection safety, what would some of the contextual factors be? Spend a few moments 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required				
		<p>talking in your group about the inner and outer context related to improving sharps safety”.</p>					
73	<p>What is required for successful implementation?</p>   <p>Inner context</p> <ul style="list-style-type: none"> • Do organizational leaders believe there is a problem? • Do leaders prioritize sharps safety? <p>Outer context</p> <ul style="list-style-type: none"> • Are there national guidelines or mandates on sharps safety? • Is there a national campaign to reduce sharps? 	<ul style="list-style-type: none"> • Based on the feedback, highlight some of the following points to supplement what has already been shared. • Inner context: • Do organizational leaders believe there is a problem? • Do leaders prioritize sharps safety? • Outer context: • Are there national guidelines or mandates on sharps safety? • Is there a national campaign to reduce sharps? 					
74	<p>What is required for successful implementation?</p>  <table border="1" data-bbox="183 1478 582 1758"> <thead> <tr> <th data-bbox="215 1489 295 1512">Context</th> <th data-bbox="438 1489 550 1512">Innovation</th> </tr> </thead> <tbody> <tr> <td data-bbox="199 1523 422 1736"> <ul style="list-style-type: none"> • Inner context • Local and organizational <ul style="list-style-type: none"> • leadership support • culture • organizational priorities • Outer context <ul style="list-style-type: none"> • policy drivers and priorities • incentives and mandates • networks </td> <td data-bbox="438 1523 574 1668"> <ul style="list-style-type: none"> • Added benefit of the intervention • Ease of use • Evidence <ul style="list-style-type: none"> • research • clinical • experiential </td> </tr> </tbody> </table>	Context	Innovation	<ul style="list-style-type: none"> • Inner context • Local and organizational <ul style="list-style-type: none"> • leadership support • culture • organizational priorities • Outer context <ul style="list-style-type: none"> • policy drivers and priorities • incentives and mandates • networks 	<ul style="list-style-type: none"> • Added benefit of the intervention • Ease of use • Evidence <ul style="list-style-type: none"> • research • clinical • experiential 	<ul style="list-style-type: none"> • Say: “The innovation or intervention to be implemented also influences the likelihood of successful implementation, depending on intrinsic characteristics, such as the added benefit it would bring to the users, or the known or available evidence about its impact”. • Say: “Again, thinking about safe injections – we can describe this as an innovation. You may want to introduce the use of safety devices like closed-system retractable needles”. • If these devices have obvious benefits to the user, for example, they are 	
Context	Innovation						
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	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required						
		<p>perceived as being easier to use, there is strong evidence on their impact and benefits –this can positively influence implementation.</p>							
75	<p>What is required for successful implementation?</p>  <table border="1" data-bbox="193 1048 754 1323"> <thead> <tr> <th data-bbox="193 1048 427 1093">Context</th> <th data-bbox="427 1048 595 1093">Innovation</th> <th data-bbox="595 1048 754 1093">Recipients</th> </tr> </thead> <tbody> <tr> <td data-bbox="193 1093 427 1323"> <ul style="list-style-type: none"> • Inner context • Local and organizational <ul style="list-style-type: none"> • leadership support • culture • organizational priorities • Outer context <ul style="list-style-type: none"> • policy drivers and priorities • incentives and mandates • networks </td> <td data-bbox="427 1093 595 1323"> <ul style="list-style-type: none"> • Added benefit of the intervention • Ease of use • Evidence <ul style="list-style-type: none"> • research • clinical • experiential </td> <td data-bbox="595 1093 754 1323"> <ul style="list-style-type: none"> • Motivation • Values/beliefs • Goals • Skills • Knowledge • Time • Resources • Support • Opinion leaders • Power • Authority </td> </tr> </tbody> </table>	Context	Innovation	Recipients	<ul style="list-style-type: none"> • Inner context • Local and organizational <ul style="list-style-type: none"> • leadership support • culture • organizational priorities • Outer context <ul style="list-style-type: none"> • policy drivers and priorities • incentives and mandates • networks 	<ul style="list-style-type: none"> • Added benefit of the intervention • Ease of use • Evidence <ul style="list-style-type: none"> • research • clinical • experiential 	<ul style="list-style-type: none"> • Motivation • Values/beliefs • Goals • Skills • Knowledge • Time • Resources • Support • Opinion leaders • Power • Authority 	<ul style="list-style-type: none"> • Say:” Finally, for implementation to succeed, the “recipients” of the innovation have got to buy in to it, to believe in it, be motivated to use it, to understand it and to be convinced of its benefits. • The motivation, beliefs, values and goals of individuals and teams are important. • Their skills, their knowledge, the time available to them, the resources to support the intervention are all relevant. • The recipients of the innovation may therefore need support. • In the case of injection safety devices, there may be a need for users to receive training, not just in the use of the new device, but also about how to use new devices in their workflow. Will it take more time? More perceived effort? How can you sell the benefits to the recipients of the change?” 	
Context	Innovation	Recipients							
<ul style="list-style-type: none"> • Inner context • Local and organizational <ul style="list-style-type: none"> • leadership support • culture • organizational priorities • Outer context <ul style="list-style-type: none"> • policy drivers and priorities • incentives and mandates • networks 	<ul style="list-style-type: none"> • Added benefit of the intervention • Ease of use • Evidence <ul style="list-style-type: none"> • research • clinical • experiential 	<ul style="list-style-type: none"> • Motivation • Values/beliefs • Goals • Skills • Knowledge • Time • Resources • Support • Opinion leaders • Power • Authority 							


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
76	<p>What is required for successful implementation?</p>  <p>The diagram illustrates the components for successful implementation. It is divided into three main categories: Context, Innovation, and Recipients, all of which are supported by a central 'Process of implementation' (plan, evaluate and reflect). A 'Key resources' icon is also present.</p> <ul style="list-style-type: none"> Context <ul style="list-style-type: none"> Inner context <ul style="list-style-type: none"> Local and organizational <ul style="list-style-type: none"> leadership support culture organizational priorities Outer context <ul style="list-style-type: none"> policy drivers and priorities incentives and mandates networks Innovation <ul style="list-style-type: none"> Added benefit Ease of use Evidence <ul style="list-style-type: none"> research clinical experiential Recipients <ul style="list-style-type: none"> Motivation Values/beliefs Goals Skills Knowledge Time Resources Support Opinion leaders Power Authority <p>Supporting factors:</p> <ul style="list-style-type: none"> Social, cultural and organizational factors (indicated by an upward arrow from the Context section) Process of implementation (for example, plan, evaluate and reflect) (indicated by an upward arrow from the bottom center) Key resources (indicated by a circular icon) 	<ul style="list-style-type: none"> • So – we can see here that when we put all of this together, implementation is influenced by many things. • An awareness of these three factors when you are planning to implement any new intervention or innovation or improvement enables you to map out where you need to act and what support you might need. • Whether talking about improving hand hygiene or waste management or urinary catheterization – think about the context, the intervention and the people on the receiving end and the likely barriers and success factors. • Here, point out that: “It is essential to remember that each culture, society and organization will be different and therefore implementation will require close attention to how those factors will affect how you approach implementation”. 	
77	<p>Practical examples: core component 1 (IPC programmes)</p> <p><small>Extracts from the Interim Practical Manual supporting national implementation of the WHO Guidelines on core components of infection prevention and control programmes</small></p> <p>Outer context</p> <p>“Legislation has been a critical part to building recognition as many won’t consider IPC and its value until there is a norm or requirement for an IPC programme.” IPC Professional from Africa</p> <p>Inner context, innovation and recipients</p> <p>“We had success in our IPC programme using a multimodal strategy and strong leadership from the highest levels of the health authority. Acting upon local data with evidence-based interventions and documenting results has been key to obtain local acceptance and integration to routine hospital health care.” IPC National Lead from Chile</p> <p><small>27/02/18 Title of the presentation 77</small></p>	<ul style="list-style-type: none"> • Here are two examples taken from the Interim Practical Manual supporting national level implementation. • We can see from a colleague in the African region that legislation was a big driver for implementation of an IPC programme – this is an example of the outer context. 	



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<ul style="list-style-type: none"> From the Chile example, there are a number of things being addressed: a multimodal approach involving strong leadership, that is, addressing the inner context and the recipients; collecting local data on impact, that is, evidence that the intervention works; and integrating IPC with routine hospital work, that is, ease of use. 	
78	<p>WHO implementation aids</p>  <p>https://www.who.int/infection-prevention/implementation-aids/</p>	<ul style="list-style-type: none"> Say:” WHO has taken these implementation theories and built a model and approach to support the implementation of its guidance that tries to address the evidence-to-practice gap. In particular, it is worth examining the many implementation documents related to hand hygiene improvement and the more recent practical manual for the core components, and see how these address some, or all, of the categories of implementation success that have been identified.“ <p>[Move to next slide]</p>	






	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
79	<p>Hand hygiene multimodal improvement strategy</p>  <p>Supporting implementation</p> <p>ONE System change Alcohol-based handrub at point of care and access to safe continuous water supply, soap and towels</p> <p>TWO Training and education Providing regular training to all health-care workers</p> <p>THREE Evaluation and feedback Monitoring hand hygiene practices, infrastructure, perceptions, & knowledge, while providing results feedback to health-care workers</p> <p>FOUR Reminders in the workplace Prompting and reminding health-care workers</p> <p>FIVE Institutional safety climate Individual active participation, institutional support, patient participation</p> <p>In other words, the WHO multimodal improvement strategy addresses these five areas:</p> <ol style="list-style-type: none"> 1. Build it (System change) 2. Teach it (Training and education) 3. Check it (Evaluation and feedback) 4. Sell it (Reminders in the workplace) 5. Live it (Institutional safety climate) <p>Handout 3</p>	<ul style="list-style-type: none"> Let us briefly return to the multimodal strategy in relation to hand hygiene. The strategy is a nice way of packaging all of the elements that are needed to support successful implementation. Read through the grey diagram. 	Handout 3
80	<p>Example of successful implementation using a multimodal strategy</p>  <p>Context</p> <ul style="list-style-type: none"> December 2006-08, 55 departments in 43 hospitals in Costa Rica, Italy, Mali, Pakistan, and Saudi Arabia. <p>Innovation</p> <ul style="list-style-type: none"> WHO hand hygiene multimodal strategy. <p>Recipients</p> <ul style="list-style-type: none"> Intervention launch endorsed by the Minister of Health. Increased dispensers at point of care. <p><small>Alloinouch S, et al. Global implementation of WHO's multimodal strategy for improvement of hand hygiene: a quasi-experimental study. Lancet Infect Dis. 2013;13(10):848-851.</small></p>	<ul style="list-style-type: none"> Say: "Let us look at a review of the impact of the WHO multimodal hand hygiene campaign across several countries. This paper identified that the campaign had been effective at increasing compliance with hand hygiene in healthcare workers. But if we look more closely through the context, innovation, and recipient lens we can see the following: The context: 55 hospital departments in 43 hospitals spanning Costa Rica, Italy, Mali, Pakistan, Saudi Arabia. Hospital leaders were passionate champions of improving the quality of IPC and believed in hand hygiene as a logical starting point. The innovation was the WHO multimodal hand hygiene improvement strategy – with a strong visible feature being the introduction of alcohol- 	

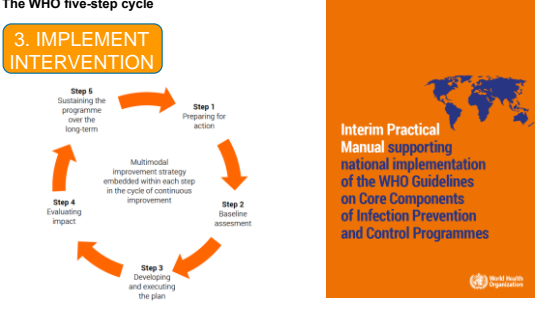
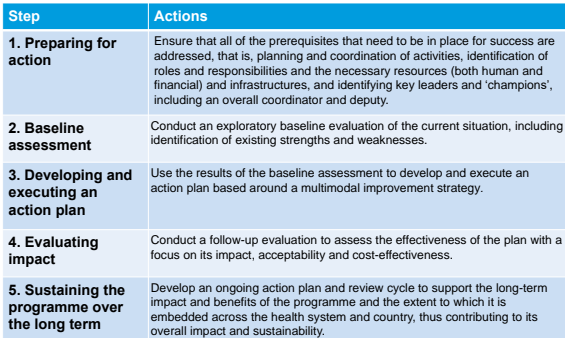
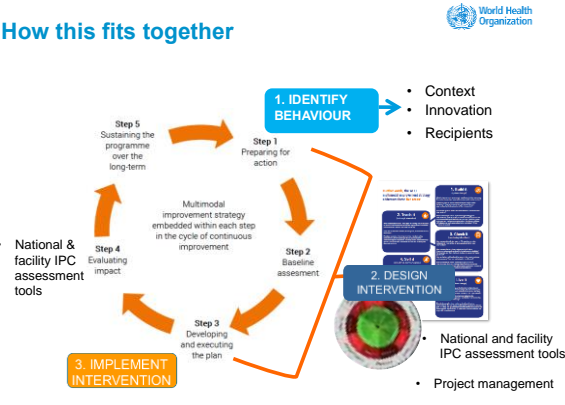
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>based handrub, locally produced at the point of care – a wonderful innovation enabling health care workers to clean their hands easily, quickly and at an affordable cost.</p> <ul style="list-style-type: none"> • The recipients – the nurses and doctors in these hospitals were motivated by their leaders’ passion and belief. They felt supported and valued because time was invested to train them and they were given the resources to make hand hygiene more achievable than before the innovation was implemented. • And this paper shows how it worked – hand hygiene improved in a sustainable way, behaviours changed, attitudes and knowledge changed”. 	
81	<p>Revisiting wasteful and unnecessary practices (Refer to the student handbook for the full list)</p> <ul style="list-style-type: none"> Routine environmental swabbing Routine use of disinfectants for environmental cleaning Unnecessary use of injections Overuse of antibiotics Overuse of urinary catheters <p style="text-align: right;">World Health Organization</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"> <p>These are ALL behaviours</p> </div> <p><small>27/02/18 Title of the presentation 81</small></p>	<ul style="list-style-type: none"> • Before we look in detail at the theory of behaviour change, let us return to the wasteful and unnecessary practices we considered earlier. • Ask a student to read out the list. • Emphasize that these are all behaviours. • To stop these wasteful practices requires an understanding of behavioural science. • This will help in the development of an effective multimodal implementation strategy. 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
82	<p>Understanding behaviour to support implementation</p>  <p>The three key steps</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px; background-color: #0070C0; color: white; text-align: center;">1. IDENTIFY BEHAVIOUR</div> <div style="border: 1px solid black; padding: 2px; background-color: #0056B3; color: white; text-align: center;">2. DESIGN INTERVENTION</div> <div style="border: 1px solid black; padding: 2px; background-color: #FF9900; color: white; text-align: center;">3. IMPLEMENT INTERVENTION</div> </div> <ul style="list-style-type: none"> • Successful implementation needs changes in the behaviour of individuals, teams and organizations. • Different theories have tried to explain the most important components of behaviour change. • Lasting behaviour change needs an assessment of the factors influencing individuals and organizations. 	<ul style="list-style-type: none"> • Implementation requires behavioural change at the individual, team or organizational level. • To support behaviour change, different models have attempted to define essential requirements leading to the successful adoption of behaviours. It is not critical to know all the models in depth, but an understanding of their existence provides confidence in current theories and their application. • This model is called the behaviour change wheel (BCW) – so let us explore it. 	
83	<p>What would you like to do?</p>  <p>1. Identify behaviour that needs addressing</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>1. IDENTIFY BEHAVIOUR Can be used for any IPC-related behaviour to identify what action is needed to address capability, opportunity and motivation of health workers</p> </div> <div style="margin-bottom: 10px;"> <p>CAPABILITY → Psychological/physical ability</p> </div> <div style="margin-bottom: 10px;"> <p>MOTIVATION → Plan, believe, want</p> </div> <div> <p>OPPORTUNITY → Physical, environmental, social</p> </div>  <p><small>Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterizing and designing behaviour change interventions. <i>Implement Sci</i>. 2011;6:42</small></p>	<ul style="list-style-type: none"> • The starting point is being as specific as possible. This means specifying the target behaviour. Specify who needs to do what, where they need to do it, when they need to do it, how often and for how long. • Being more specific about the behaviour(s) we are trying to change allows us to be much more focused when it comes to understanding these behaviours. • The foundation of this helpful model is that three conditions need to be in place for any behaviour to occur in any context. • First, you need to have the capability to perform that behaviour. Broadly 	<p>Ask participants to think about hand hygiene improvement – invite them to shout out what are the capabilities, opportunities and motivations relevant to hand hygiene?</p> <p>Aim for a 5 minute brainstorm – write on flip chart.</p>



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>speaking this is split into the psychological or physical ability. Put simply, you need to know what to do and how to do it. This is the starting point.</p> <ul style="list-style-type: none"> • But we also need motivation – we can know what to do and how to do it, but if we do not care, we will not do it, so we need motivation. • So we need to know, what to do, value doing it and also we need opportunities – the environment needs to be conducive to that behaviour. This could be the physical opportunity – having the time to do something – having the money to do something – having the right resources to do something – being able to be in the right place to do something. Or it could be the social environment – the cultural environment that governs our everyday norms – what are the influences of others on our behaviour for example? 	
84	<p>Hand hygiene example</p> <p>How can we influence HCW capability, motivation and opportunity to do the right thing?</p>  <p>1. IDENTIFY BEHAVIOUR</p> <p>CAPABILITY</p> <ul style="list-style-type: none"> • Do HCWs know the fit moments for hand hygiene? • Do they know the correct technique? <p>MOTIVATION</p> <ul style="list-style-type: none"> • Do HCWs believe the evidence that hand hygiene works? • Is there a campaign and reminders to promote hand hygiene? <p>OPPORTUNITY</p> <ul style="list-style-type: none"> • Is handrub available at the point of care? • Is here a system for replenishing empty bottles? • Do the sinks work? <p>World Health Organization</p> <p>Answers</p>	<p>Here are some ideas on capability, opportunity and motivation related to hand hygiene – do they match with what the students said?</p>	

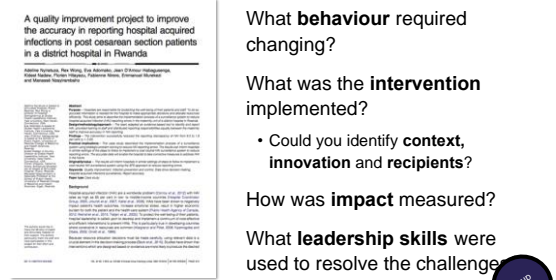
	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
85	<p>What would you like to do?</p> <p>World Health Organization</p> <p>2. Design your intervention</p> <p>1. IDENTIFY BEHAVIOUR</p> <p>2. DESIGN INTERVENTION</p>  <p><small>Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterizing and designing behaviour change interventions. <i>Implement Sci</i>. 2011;6:42.</small></p>	<ul style="list-style-type: none"> Describe the slide. The BCW consists of three layers, like an onion, each one building on the other. At the heart is the inner wheel that logically focuses on addressing capability-opportunity and motivation, which can be very useful at the time of designing an intervention. Emphasize that the BCW is just one way to try and make it simple and systematic to improve practice by helping guide people’s planning and thinking – similar to the instruction manual when you are building a bookshelf as mentioned earlier. <p>It is one resource that might help you as an IPC leader to address a challenging problem and support implementation and sustainability.</p>	Handout 4 – the Behaviour change wheel
86	<p>What would you like to do?</p> <p>World Health Organization</p> <p>Focus on the 'red' part of the behaviour change wheel</p> <p>2. DESIGN INTERVENTION</p>  <p>Education = knowledge Persuasion = communication Incentives = reward Coercion = punishment Training = skills Restriction = limits Environmental restructuring Modelling = role model Enablement = barriers</p> <p><small>Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterizing and designing behaviour change interventions. <i>Implement Sci</i>. 2011;6:42.</small></p>	<ul style="list-style-type: none"> Say: “Some of the components of the intervention can include educating the health care workers (or the public), developing communication and awareness campaigns, offering rewards for optimal practice or punishing suboptimal behaviours, including limits on who can use certain products or do certain techniques (such as not allowing junior doctors to prescribe certain antibiotics, etc.)”. 	







	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required																				
87	<p>What would you like to do?</p> <p>Identifying measures in optimal injection safety</p>  <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">2. DESIGN INTERVENTION</div>  <table border="1" style="margin-left: 10px;"> <thead> <tr> <th>Measure to be used</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr><td>Education = knowledge</td><td></td></tr> <tr><td>Persuasion = communication</td><td></td></tr> <tr><td>Incentives = reward</td><td></td></tr> <tr><td>Coercion = punishment</td><td></td></tr> <tr><td>Training = skills</td><td></td></tr> <tr><td>Restriction = limits</td><td></td></tr> <tr><td>Environmental restructuring</td><td></td></tr> <tr><td>Modelling = role model</td><td></td></tr> <tr><td>Enablement = barriers</td><td></td></tr> </tbody> </table> </div> <p><small>Micha S. van Stralen MM, West R. The behaviour change wheel: a new method for characterizing and designing behaviour change interventions. <i>Implement Sci.</i> 2011;6:42</small></p> 	Measure to be used	Yes/No	Education = knowledge		Persuasion = communication		Incentives = reward		Coercion = punishment		Training = skills		Restriction = limits		Environmental restructuring		Modelling = role model		Enablement = barriers		<ul style="list-style-type: none"> Say: “So, which of those options would you imagine that could be used as part of an injection safety intervention?” 	<p>Allow 5 minutes on this task as it is likely to be difficult. Ask participants to go through each of the categories and see if they think that they could be applied to injection safety programmes. If so, let them suggest how. Write on white board or pad.</p>
Measure to be used	Yes/No																						
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88	<p>What would you like to do?</p> <p>Focus on the 'grey' part of the behaviour change wheel</p>  <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">2. DESIGN INTERVENTION</div>  <div style="margin-left: 10px;"> <p>Communication/marketing Legislation Service provision Regulation Fiscal measures Guidelines Environmental/social planning</p> </div> </div> <p><small>Micha S. van Stralen MM, West R. The behaviour change wheel: a new method for characterizing and designing behaviour change interventions. <i>Implement Sci.</i> 2011;6:42</small></p>	<ul style="list-style-type: none"> Say: “The outer layer of the BCW is rather like the outer context factors we discussed earlier. It prompts us to think about things like policies and guidelines and authority – external levers to support behaviour change – things that usually are imposed by authority, for example, fixing the number of patients per nurse or regulations.” Although these are outside of our control they can still be the deal breaker for successful implementation of an improvement or intervention. Think back to the sharps injury example. If a government regulates for a ban on all injection devices except those that are safety engineered – this catapults the success of your 																					




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89	<p>Implement intervention</p> <p>The WHO five-step cycle</p>  <p>Interim Practical Manual supporting national implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes</p> <p><small>Based on the validated approach to implementation developed in relation to the WHO guidelines on hand hygiene in health care (2009)</small></p>	<p>improvement to a new level!</p> <ul style="list-style-type: none"> WHO has developed a five-step approach to support the implementation of IPC interventions. 													
90	<p>The five implementation steps</p>  <table border="1"> <thead> <tr> <th>Step</th> <th>Actions</th> </tr> </thead> <tbody> <tr> <td>1. Preparing for action</td> <td>Ensure that all of the prerequisites that need to be in place for success are addressed, that is, planning and coordination of activities, identification of roles and responsibilities and the necessary resources (both human and financial) and infrastructures, and identifying key leaders and 'champions', including an overall coordinator and deputy.</td> </tr> <tr> <td>2. Baseline assessment</td> <td>Conduct an exploratory baseline evaluation of the current situation, including identification of existing strengths and weaknesses.</td> </tr> <tr> <td>3. Developing and executing an action plan</td> <td>Use the results of the baseline assessment to develop and execute an action plan based around a multimodal improvement strategy.</td> </tr> <tr> <td>4. Evaluating impact</td> <td>Conduct a follow-up evaluation to assess the effectiveness of the plan with focus on its impact, acceptability and cost-effectiveness.</td> </tr> <tr> <td>5. Sustaining the programme over the long term</td> <td>Develop an ongoing action plan and review cycle to support the long-term impact and benefits of the programme and the extent to which it is embedded across the health system and country, thus contributing to its overall impact and sustainability.</td> </tr> </tbody> </table>	Step	Actions	1. Preparing for action	Ensure that all of the prerequisites that need to be in place for success are addressed, that is, planning and coordination of activities, identification of roles and responsibilities and the necessary resources (both human and financial) and infrastructures, and identifying key leaders and 'champions', including an overall coordinator and deputy.	2. Baseline assessment	Conduct an exploratory baseline evaluation of the current situation, including identification of existing strengths and weaknesses.	3. Developing and executing an action plan	Use the results of the baseline assessment to develop and execute an action plan based around a multimodal improvement strategy.	4. Evaluating impact	Conduct a follow-up evaluation to assess the effectiveness of the plan with focus on its impact, acceptability and cost-effectiveness.	5. Sustaining the programme over the long term	Develop an ongoing action plan and review cycle to support the long-term impact and benefits of the programme and the extent to which it is embedded across the health system and country, thus contributing to its overall impact and sustainability.	<ul style="list-style-type: none"> Ask a student to read the steps. 	
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91	<p>How this fits together</p>  <ul style="list-style-type: none"> Context Innovation Recipients National and facility IPC assessment tools Project management 	<ul style="list-style-type: none"> This slide brings all of the theory together around the five-step approach to implementation Starting from step 1 walk through the steps saying: "During the preparatory phase, this is when you start to think about the context, the intervention or innovation that you want to change and the recipients of that intervention." As you move to step 2 you then use available tools to perform a baseline assessment that provides rich and vital information on the current situation. It will 													







	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>reinforce your initial thinking on the context for change, provide insights on the challenges and barriers to implementation and provide some information on recipients. Baseline assessment is a critical step in how you will design and execute your intervention plans.</p> <ul style="list-style-type: none"> • As you move to step 3 and develop your plan, informed by all of the intelligence gathered so far, this is where you will drill down and consider each of the elements of the multimodal strategy. That is, what you need to put in place to build the best supportive system for change, use of the most appropriate teaching approaches, agree how you will check whether a change has taken place and practice is improved, what methods you might use to sell the change, and how you will secure the necessary institutional support towards a culture that values the change in practice. <p>Step 4 involves repeating an assessment of the overall impact of the intervention and then reviewing your approach and plans to determine how to sustain the change.</p>	






	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
92	<p>The use of quality improvement methods</p> <p>(For example, Plan-Do-Study-Act [PDSA] cycle)</p>  <p>PDSA Cycle The W. Edwards Deming Institute</p> <p>*PDSA Cycle graphic used courtesy of The W. Edwards Deming Institute®</p> <p><small>W. Edwards Deming, The New Economics for Industry, Government, Education, ©1984 The W. Edwards Deming Institute, published by The MIT Press, figure 13, p. 132. Training edition, pages 4 & 5 in learning partnerships for improvement, Geneva: World Health Organization, 2018.</small></p> <p>World Health Organization logo</p> <p>PDSA cycles are ideal for small, frequent tests of ideas before making larger, system-wide changes.</p> <p>They can be used in adjunct with other quality improvement approaches.</p> <p>The United States Institute for Healthcare Improvement incorporates PDSA cycles as part of its model to accelerate improvement.</p> 	<ul style="list-style-type: none"> • There are many approaches to QI that have been used in health care. • Ask participants whether they have used any QI models. Mention PDSA cycles as just one example of an approach to improving quality – the students may have used or been involved in 5S-Kaizen or other Lean methodology or the Johns Hopkins Translating Evidence into Practice (TRIP) model or others – probe and invite feedback. • As stated on the slide, PDSA cycles are ideal for small, frequent tests of ideas before making larger system-wide changes. They can be used in adjunct with other QI approaches. • The United States Institute for Healthcare Improvement incorporates PDSA cycles as part of its model for improvement to accelerate the process. • Using PDSA, three key questions are initially asked in any order: 1) What are we trying to accomplish? This challenges teams to be very specific about the goal they would like to accomplish, including the population concerned, the timeframe and the magnitude of change. 2) How will we know that a change is an 	<p>Allow 2-3 minutes for participants to talk as there are likely to be interesting insights for the group.</p>








	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>improvement? This challenges teams to specify the outcomes of interest and what constitutes a meaningful change. 3) What change can we make that will result in improvement? This ensures consideration is given to collecting evidence that an intervention will be practical and feasible in the chosen setting and that it will be effective. Teams then enter the PDSA cycle. Results from PDSA cycles feed back to the team and provide additional answers to the three questions, which may result in adjustments.</p> <ul style="list-style-type: none"> • Building a fundamental understanding of QI approaches and learning from applied examples of these approaches will be useful for IPC focal persons. • Signpost the students to the resource at the foot of the page which summarizes a number of these QI approaches. 	
93	<p>IPC implementation in practice</p> <p>Group work 2</p> 	<ul style="list-style-type: none"> • This is a case study/group work. • Use the instructions in the document for group work 3 to guide the participants. • At the end of 30 minutes, invite group feedback. 	<p>Group work 2 in the student handbook.</p> <p>Allow 30 minutes for this exercise.</p>



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required										
94	<p>Summary answers</p>  <table border="1" data-bbox="188 443 746 801"> <thead> <tr> <th>Question</th> <th>Sample answer</th> </tr> </thead> <tbody> <tr> <td>Behaviour</td> <td>Under-reporting of HAI. At the individual level, there was only one nurse. At the team level, a team approach was absent. At the organizational level, the organization did not value data.</td> </tr> <tr> <td>Intervention</td> <td> <ul style="list-style-type: none"> Interventions: new ways of reporting; new and standardized definitions; new tools; validation teams; training; guidelines. Context: leadership support; buy-in of senior managers; open culture; readiness to change; organizational priority. Innovation: used existing validated tools – tool acceptance; tools easy to use; tools based on research. Recipients: team approach; those with power/authority mandated the change (chief nursing officer, head of maternity); staff motivated; staff familiar with resources/tools </td> </tr> <tr> <td>Impact measurement</td> <td>Used quantitative indicators, that is, the difference between HAI rates detected through routine unit reports and the validation team.</td> </tr> <tr> <td>Leadership skills used</td> <td>Elements of transformational and transactional leadership style - engagement, involvement, communication to secure buy-in, continuous follow-up.</td> </tr> </tbody> </table> 	Question	Sample answer	Behaviour	Under-reporting of HAI. At the individual level, there was only one nurse. At the team level, a team approach was absent. At the organizational level, the organization did not value data.	Intervention	<ul style="list-style-type: none"> Interventions: new ways of reporting; new and standardized definitions; new tools; validation teams; training; guidelines. Context: leadership support; buy-in of senior managers; open culture; readiness to change; organizational priority. Innovation: used existing validated tools – tool acceptance; tools easy to use; tools based on research. Recipients: team approach; those with power/authority mandated the change (chief nursing officer, head of maternity); staff motivated; staff familiar with resources/tools 	Impact measurement	Used quantitative indicators, that is, the difference between HAI rates detected through routine unit reports and the validation team.	Leadership skills used	Elements of transformational and transactional leadership style - engagement, involvement, communication to secure buy-in, continuous follow-up.	<ul style="list-style-type: none"> Read through the slide to highlight anything missing from the group feedback. 	
Question	Sample answer												
Behaviour	Under-reporting of HAI. At the individual level, there was only one nurse. At the team level, a team approach was absent. At the organizational level, the organization did not value data.												
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95	<p>Key literature</p>  <p>WHO. A Guide to the implementation of the WHO multimodal hand hygiene improvement strategy. 2009. http://www.who.int/gpsc/5may/Guide_to_implementation.pdf</p> <p>WHO. Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level. 2016. http://apps.who.int/iris/bitstream/10665/251730/1/9789241549929-eng.pdf?ua=1</p> <p>TDR. UNICEF/UNDP/World Bank/WHO. Implementation research toolkit. 2014. http://www.who.int/tdr/publications/year/2014/ir-toolkit-manual/en/</p> 	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 											
96	<p>References</p>  <p>Saint S, Howell JD, Krein SL. Implementation science: how to jumpstart infection prevention. <i>Infect Control Hosp Epidemiol.</i> 2010;31(Suppl. 1):S14-S17.</p> <p>Ferlie E, Fitzgerald L, Wood M. Getting evidence into clinical practice: an organisational behaviour perspective. <i>J Health Serv Res Policy.</i> 2000;5(2):96–102.</p> <p>Eccles MP, Mittman MB. Welcome to implementation science. <i>Implement Sci.</i> 2006;1:1.</p> <p>Andreasen A. Marketing social change—changing behavior to promote health, social development, and the environment. San Francisco, CA: Jossey-Bass; 1995.</p> <p>Evidence review: social marketing for the prevention and control of communicable disease. Stockholm: European Centre for Disease Prevention and Control; 2012. http://ecdc.europa.eu/en/publications/Publications/Social-marketing-prevention-control-of-communicable-disease.pdf</p> 	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 											


	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
97	<p>Session 4:</p>  <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Effective communication and advocacy</p> </div>	<ul style="list-style-type: none"> • Welcome students to the final session of the day addressing a very important aspect of leadership that has already emerged throughout many of the other sessions. 	
98	<p>Competencies</p>  <ul style="list-style-type: none"> • Advocate for the use of effective communication approaches to facilitate multidisciplinary interactions. • Source or support development of suitable IPC communication resources for citizens, users and HCWs. • Encourage active listening and use right language to encourage constructive multidisciplinary discussions. • Demonstrate communication values that foster building or strengthening multidisciplinary relations. • Communicate effectively with key external stakeholders about IPC recommendations. 	<ul style="list-style-type: none"> • Read the slide or invite a student to read the slide. 	
99	<p>Learning objectives</p>  <ul style="list-style-type: none"> • Define communication. • Explain importance of communication towards optimal IPC. • List components of the communication process. • Describe communication channels frequently used in IPC. • Select and apply suitable communication approaches to different real-life scenarios. • Define conflict. • Describe skills and behaviours that contribute to optimal conflict resolution. 	<ul style="list-style-type: none"> • Read the slide or invite a student to read the slide. 	










	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
100	<p>Key points</p>  <ul style="list-style-type: none"> • Effective communication is a critical part of IPC leadership. Many IPC situations require effective interpersonal communication, for example: <ul style="list-style-type: none"> • implementing a new innovation • dealing with infection outbreaks, epidemics, emergencies... • Providing information and modifying behaviours of professionals and patients demands effective communication. 	<ul style="list-style-type: none"> • Read the slide 	
101	<p>What is communication?</p>  <p>The deliberate or accidental transfer of information</p> <p>Essentially, communication is Likely to include thoughts or feelings. (Pearson J et al, 2000)</p> <p>Good communication would allow the parties involved to speak and be listened to without interruption, ask questions, and express thoughts in an understandable manner for all individuals or groups involved.</p> <p><small>Pearson J, Nelson P. Introduction to human communication: understanding and sharing. Boston, MA: McGraw-Hill, 2000.</small></p>	<ul style="list-style-type: none"> • Read the slide. • Stress the fact that communication involves feelings, explicit or implicit, and ideally the reciprocity of the process. • It also includes non-verbal communication. 	
102	<p>Using communication skills in IPC</p>   <ul style="list-style-type: none"> • Can you think of any IPC situation where you had to use communication skills? • What worked well and what was challenging? 	<ul style="list-style-type: none"> • Read the slide and ask participants to spend 2 minutes thinking about a situation where they have found communication skills particularly relevant or demanding. • If a prompt is needed, prompt them to think of communication with patients, relatives, people more senior than themselves, for example, senior doctors. 	<p>Allow 5 minutes for collective discussion – summarize key themes emerging.</p>



	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
103	<p>Using communication skills in IPC</p>  <p>Can you think of any IPC situation where you had to use communication skills?</p> <ul style="list-style-type: none"> • Developing leaflets for patients and family members or staff. • Leading multidisciplinary teams during outbreak investigations. • Reporting to hospital management on performance indicators. • Responding to journalists about hospital performance. • Presenting a successful hand hygiene programme at a conference. • Advocating for more resources (including an IPC budget). 	<p>Read the slide, connecting to any experience mentioned by the participants.</p>	
104	<p>Essential components of communication</p>  <p>Seven key elements</p> <p>Seven key elements are essential in the process of communicating information.</p> <ol style="list-style-type: none"> 1. People involved 2. Message(s) sent and/or perceived 3. Channel(s) used 4. Amount of 'noise' present 5. Context where communication happens 6. Feedback sent in response 7. Effect on the people involved 	<ul style="list-style-type: none"> • Read the slide. • Ask if all different components are clear. 	<p>Allow 2-4 minutes for this step in case any steps are not clear.</p>
105	<p>Communication channels</p>  <p>(Not exhaustive)</p> <ul style="list-style-type: none"> • Direct communication • Practice regulations • Education • SMS • Mass media • Telephone communication • Meetings • Policy, guidelines • Care pathways • Information packs • Handbooks • Formal education • Informal training • E-learning systems • Intranet/Internet • E-mail • Bleep • Social networks • Radio • Internet • Banners/posters 	<ul style="list-style-type: none"> • Say: "These are all ways of communicating messages. • Some studies on IPC have identified these channels. This evidence does not imply that all channels will need to be used in all situations and settings". 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required										
106	<p>Communication channels </p> <p>Which channel works best in the following situations?</p> <ul style="list-style-type: none"> • A new type of urinary catheter is going to be used from now on in your facility. • A surgeon had a sharps injury whilst operating on a patient with a bloodborne virus and she is worried about her career. • A peer IPC focal person would like to meet and discuss creating a network of IPC focal persons in the country. • WHO has launched a new campaign on IPC and AMR and you want to launch in the facility/district/nationally. 	<ul style="list-style-type: none"> • Refer students to the student handbook, group work 3, and read the instructions prior to starting the group work. • Write student suggestions on flip chart. 	<p>Group work 3 – refer to the student handbook. 5 minutes for group work. 10 minutes for feedback.</p>										
107	<p>Communication channels </p> <p>Sample answers</p> <table border="1" data-bbox="204 920 746 1200"> <thead> <tr> <th>Situation</th> <th>Channel</th> </tr> </thead> <tbody> <tr> <td>A new type of urinary catheter is going to be used from now on in your facility.</td> <td>Meetings, guidelines and standard operating procedures, training (formal and informal), Grand Rounds, posters.</td> </tr> <tr> <td>A surgeon had a sharps injury whilst operating on a patient with a bloodborne virus and she is worried about her career.</td> <td>Direct face-to-face communication, telephone.</td> </tr> <tr> <td>A peer IPC focal person would like to meet and discuss creating a network of IPC focal persons in the country.</td> <td>Direct face-to-face communication.</td> </tr> <tr> <td>WHO has launched a new campaign on IPC and AMR and you want to launch in the facility/district/nationally.</td> <td>Meeting with managers to secure agreement, handbooks and advocacy materials, videos, mass media, radio, social media, intranet, posters/banners.</td> </tr> </tbody> </table> 	Situation	Channel	A new type of urinary catheter is going to be used from now on in your facility.	Meetings, guidelines and standard operating procedures, training (formal and informal), Grand Rounds, posters.	A surgeon had a sharps injury whilst operating on a patient with a bloodborne virus and she is worried about her career.	Direct face-to-face communication, telephone.	A peer IPC focal person would like to meet and discuss creating a network of IPC focal persons in the country.	Direct face-to-face communication.	WHO has launched a new campaign on IPC and AMR and you want to launch in the facility/district/nationally.	Meeting with managers to secure agreement, handbooks and advocacy materials, videos, mass media, radio, social media, intranet, posters/banners.	<ul style="list-style-type: none"> • Compare student suggestions with the sample answers provided here. 	
Situation	Channel												
A new type of urinary catheter is going to be used from now on in your facility.	Meetings, guidelines and standard operating procedures, training (formal and informal), Grand Rounds, posters.												
A surgeon had a sharps injury whilst operating on a patient with a bloodborne virus and she is worried about her career.	Direct face-to-face communication, telephone.												
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WHO has launched a new campaign on IPC and AMR and you want to launch in the facility/district/nationally.	Meeting with managers to secure agreement, handbooks and advocacy materials, videos, mass media, radio, social media, intranet, posters/banners.												
108	<p>Managing conflicts in IPC </p> <p>Introducing change may sometimes result in conflict</p> <ul style="list-style-type: none"> • Conflict and tensions are natural, routine situations in the lives of HCWs and organizations. • Conflict is “a dynamic process between individuals and/or groups as they experience negative emotional reactions to perceived disagreements and interference with the attainment of goals”. (Barki & Hartwick, 2004) • The anticipation of conflict and its effect on people, teams, organizations are much more negative than conflict itself.   <p><small>https://doi.org/10.1186/1745-2875-15-31 (CC) Public Domain. Free for personal and commercial use. No attribution required) https://doi.org/10.1186/1745-2875-15-31 License: Free for personal and commercial use. No attribution required) Barki H, Hartwick J. Conceptualizing the interpersonal conflict. Int J Conflict Manag. 2004;15(3):216-244.</small></p>	<ul style="list-style-type: none"> • Say: “Perhaps inevitably, the changes and innovation, and even the pace that the implementation of the new core components and similar improvement initiatives may require, could lead to conflict between members of the team, professional groups in a facility, as well as stakeholders at national level. • Conflict is not necessarily a negative event or situation and can be used to address shortcomings of the interventions proposed and their implementation. • We cannot ignore the 	<p>Ask participants: “Have you already anticipated any areas or aspects where the introduction of the core components may lead or encourage conflict in your facility?”</p> <p>Allow the participants to discuss for 5 minutes; encourage their open discussion with the group.</p>										

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		<p>psychological effects of sudden, drastic, dramatic change, including fear and insecurity, that may lead to conflict as previously mentioned.</p> <ul style="list-style-type: none"> • Each of the components is complex in the sense that each requires several independent actions, behaviours and attitudes to come together This can be stressful and demand communication skills. • For example, the adequate dissemination of new guidelines requires that many stakeholders are approached and the impact of such guidelines on their positions, status, etc., are evaluated and discussed. • Equally, successfully implementing a new surveillance or monitoring and evaluation system is likely to require the interaction of several departments where, if information is not clear, conflict could emerge. 	
109	<p>Leader's skills for dealing with conflicts</p>  <div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Excellent communication</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Situational awareness</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Role modelling</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Fostering positive culture</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Organizational support</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Zero tolerance</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Visibility and presence</div> <div style="background-color: #0056b3; color: white; padding: 2px 5px; border-radius: 3px;">Being responsive</div> </div> <ul style="list-style-type: none"> • As a leader, you should demonstrate these skills and qualities when dealing with conflict. • They may also serve to prevent such conflict. • Communication is an important aspect of conflict resolution. 	<ul style="list-style-type: none"> • Read the slide. • [Participants may need to be told what 'situational awareness' is (that is, recognizing the interaction between team members and between members and the environment), 'responsiveness' (addressing conflict promptly), 'organizational support' (that is, mechanisms in place that 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
		ensure organizational approaches).	
110	<p>Resolving conflicts constructively</p>  <p>Plan and prepare the environment and the people involved</p> <ol style="list-style-type: none"> 1. Choose the right moment. <ul style="list-style-type: none"> - Avoid distractions, be prepared and able to spend time discussing. 2. Focus your attention on 'active listening'. <ul style="list-style-type: none"> - Take turns to speak, summarize and paraphrase each intervention 3. Set a goal of finding a solution. <ul style="list-style-type: none"> - Work together and think of 'win-win' outcomes. 4. Identify what is needed for all the parties involved. <ul style="list-style-type: none"> - Aim to resolve each issue affecting each party, empathise. 5. Disentangle cognitive and emotional aspects of the conflict. <ul style="list-style-type: none"> - Disagree about ideas or approaches, but do not personalise. 	<ul style="list-style-type: none"> • Say: "As with leadership, it may be very useful to think about how you tend to deal with conflict situations. For example, some tools have already been developed to explain whether your approach tends to focus on your benefit (assertiveness) or mutual benefit (cooperativeness). • Depending on the different combinations of assertiveness and cooperativeness, five types of conflict-resolution personalities could be suggested. • For example, someone with low cooperativeness and low assertiveness is likely to avoid resolving conflicts as he/she does not like to be involved in the process. • The danger is that they leave unresolved situations for a long time, etc. On the other hand, someone with high assertiveness and high cooperativeness will demonstrate collaborating conflict resolution". 	Ask participants to comment and reflect on these conflict resolution suggestions.

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
111	<p>Reference and further reading</p>  <p>Brewster L, Tarrant C, Dixon-Woods M. Qualitative study of views and experiences of performance management for healthcare-associated infections. <i>J Hosp Infect.</i> 2016;94(1):41-47.</p> <p>Hale R, et al. Working practices and success of infection prevention and control teams: a scoping study. <i>J Hosp Infect.</i> 2015;89(2):77-81.</p> <p>Elliott P. Infection control: a psychosocial approach to changing practice. Oxford: Radcliffe Publishing; 2009.</p> <p>Almost J, et al. Managing and mitigating conflict in healthcare teams: an integrative review. <i>J Adv Nurs.</i> 2016;72(7):1490-1505.</p> <p>Barki H, Hartwick J. Conceptualizing the interpersonal conflict. <i>Int J Conflict Managmt.</i> 2004;15(3):216-244.</p> <p>Jehn K. A multimethod examination of the benefits and detriments of intragroup conflict. <i>Adm. Sci. Q.</i> 1995;40:256-282.</p> <p>Friedman R, Currell S, Tsai JC. What goes around comes around: the impact of personal conflict styles on work conflict and stress. <i>Int J Conflict Managmt.</i> 2000;11(1):32-55.</p> <p>Jehn K, Bendersky C. Intragroup conflict in organizations: a contingency perspective on the conflict-outcome relationship. In: Staw B, Cummings LL, editors. <i>Research in organizational behavior</i>. Greenwich, CT: JAI Press; 2003:189-244.</p> <p>Pearson J, Nelson P. Introduction to human communication: understanding and sharing. Boston, MA: McGraw-Hill; 2000.</p> <p>Barnlund DC (2008). A transactional model of communication. In: Mortensen CD, editor. <i>Communication theory</i> (2nd ed.). New Brunswick, NJ: Transaction; 2008:47-57.</p> <p>Edwards R, et al. Communication strategies in acute health care: evaluation within the context of infection prevention and control. <i>J Hosp Inf.</i> 2012;82: 25-29.</p> 	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	
112	<p>References and further reading</p>  <p>Abad C, Fearday A, Salfar N. Adverse effects of isolation in hospitalised patients: a systematic review. <i>J Hosp Infect.</i> 2010;76(2):97-102.</p> <p>Best practices for communicating with the public during an outbreak. Report of WHO Expert Consultation on Outbreak Communications. Singapore, 21–23 September 2004. Geneva: World Health Organization; 2005. http://www.who.int/cs/resources/publications/WHO_CDS_2005_32web.pdf?ua=1</p> <p>WHO. Outbreak communication guidelines. 2005. http://apps.who.int/iris/bitstream/10665/69369/1/WHO_CDS_2005_28_eng.pdf?ua=1&ua=1</p> <p>WHO. Effective media communication during public health emergencies. 2005. http://www.who.int/csr/resources/publications/WHO%20MEDIA%20FIELD%20GUIDE.pdf</p> <p>Technical Report. Rapid evidence review of interventions for improving health literacy Insights into health communication, Stockholm: European Centre for Disease Prevention and Control; 2012. http://ecdc.europa.eu/en/publications/Publications/1205-TER-Improving-Health-Literacy.pdf</p> <p>WHO. Effective communications: participant handbook: communications training programme for WHO staff. 2015. http://www.who.int/communicating-for-health/resources/participant-handbook-english.pdf?ua=1</p> <p>Vayalunkal J, et al. Effective communication of infection control data: how do we give them what they want?. <i>Am J Inf Control.</i> 2014;42(6):S72.</p> <p>Abraham T. Risk and outbreak communication: lessons from alternative paradigms. <i>Bull World Health Org.</i> 2009;87(8): 604-607.</p> 	<ul style="list-style-type: none"> No need to read the slide – just explain that there are further reading materials on all of the topics addressed here. 	
113	<p>Recap on key points</p>  <div style="display: flex; justify-content: space-between;"> <div style="width: 22%;"> <p>Session 1</p>  <p>Introduction to leadership in the context of: the core components; multimodal strategy; implementation resources; project management; IPC interlinkages; principles of adult learning.</p> </div> <div style="width: 22%;"> <p>Session 2</p>  <p>Drill-down on IPC leadership: what makes a good leader? relevance of leadership to IPC; leadership characteristics; types of leaders; leadership challenges and opportunities.</p> </div> <div style="width: 22%;"> <p>Session 3</p>  <p>Exploration of implementation and behaviour change: implementation success factors; behaviour change and implementation; quality improvement cycles and implementation; leadership challenges and solutions.</p> </div> <div style="width: 22%;"> <p>Session 4</p>  <p>Focus on communication and advocacy: communication skills in IPC; choosing the right communication channels; leadership and conflict resolution.</p> </div> </div> <p style="text-align: right; font-size: small;">111</p>	<ul style="list-style-type: none"> As the entire module comes to an end, recap on all of the sessions by reading through the slide. 	

	Slide	Notes: Descriptions and suggestions for the trainer to consider*	Resources required
114	<p data-bbox="204 405 373 439">Thank you</p>   <p data-bbox="204 685 347 712">Global IPC Unit</p> <p data-bbox="204 712 304 757">WHO 20 Avenue Appia 1211 Geneva 27</p> <p data-bbox="204 786 379 797"><small>WHO Infection Prevention and Control Unit 2017</small></p>	<ul style="list-style-type: none"><li data-bbox="799 376 1050 409">• End of the day	

Annex 1: Pre-test/post-test questions

MASTER FORM – for use in session

Advanced IPC knowledge exam: Leadership

All questions are multiple choice. Please circle one answer or all that apply as per each question's instructions. The exam content is divided according to each module given as part of the advanced IPC training.

LEADERSHIP AND IPC PROGRAMME MANAGEMENT

1. Which of the following are true statements about leadership and effective IPC (please circle one answer)?
 - a. IPC leaders can have different leadership styles such as situational, transformational, and transactional leadership
 - b. IPC leaders in close and regular contact with wards and units positively influence quality of care.
 - c. Studies have shown that leadership has been associated with improved IPC practices and selected HAI outcome reductions.
 - d. All of the above

2. What is 'implementation' (please circle all that apply)?
 - a. Implementation is the translation of *research evidence* into clinical, organizational and professional practice
 - b. Implementation is the translation of *professional practice* into clinical, organizational and research evidence
 - c. Implementation includes preparing for action, conducting a baseline assessment, developing and executing an action plan, evaluating impact, and sustaining an improvement programme over the long-term
 - d. None of the above

3. Name 3 skills that IPC focal persons can use when dealing with conflict (please circle one answer)?
 - a. Responsiveness, excellent communication, discipline
 - b. Visibility and presence, assertiveness and friendliness
 - c. Zero tolerance, assertiveness and discipline
 - d. Excellent communication, role modeling, and situational awareness
 - e. Responsiveness, zero tolerance, avoidance

FORM WITH ANSWERS – for trainer

Advanced IPC knowledge exam: Leadership

All questions are multiple choice. Please circle one answer or all that apply as per each question's instructions. The exam content is divided according to each module given as part of the advanced IPC training.

LEADERSHIP AND IPC PROGRAMME MANAGEMENT

4. Which of the following are true statements about leadership and effective IPC (please circle one answer)?
 - e. IPC leaders can have different leadership styles such as situational, transformational, and transactional leadership
 - f. IPC leaders in close and regular contact with wards and units positively influence quality of care.
 - g. Studies have shown that leadership has been associated with improved IPC practices and selected HAI outcome reductions.
 - h. All of the above**

5. What is 'implementation' (please circle all that apply)?
 - e. Implementation is the translation of *research evidence* into clinical, organizational and professional practice**
 - f. Implementation is the translation of *professional practice* into clinical, organizational and research evidence
 - g. Implementation includes preparing for action, conducting a baseline assessment, developing and executing an action plan, evaluating impact, and sustaining an improvement programme over the long-term**
 - h. None of the above

6. Name 3 skills that IPC focal persons can use when dealing with conflict (please circle one answer)?
 - f. Responsiveness, excellent communication, discipline
 - g. Visibility and presence, assertiveness and friendliness
 - h. Zero tolerance, assertiveness and discipline
 - i. Excellent communication, role modeling, and situational awareness**
 - j. Responsiveness, zero tolerance, avoidance

Annex 2: Group work 1

Instructions

- Work in groups of five to seven people – a facilitator will join each group.
- First, read the summary below based on an article by Dramowski et al².
- Answer the two questions presented at the end in your groups.

Setting

South African paediatric and neonatal wards.

Background information

- The epidemiology of paediatric and neonatal HAI in South Africa is poorly documented.
- The burden of HAI is substantial, but underappreciated, owing to a lack of HAI surveillance and reporting.
- Recent clinical surveillance at one of the large children's hospitals in the country documented a HAI prevalence of 24%, with a predominance of hospital-acquired pneumonia and bloodstream infection.
- HAI incidence was highest in the paediatric intensive care unit (PICU).
- PICU device-associated infections were double those reported from PICUs in other low- and middle-income settings.
- Two-thirds of all in-patient mortality occurred in association with HAI, with crude mortality 6-fold higher than among HAI-unaffected hospitalizations.
- In 2012, a national healthcare QI programme was launched, together with a national accreditation body. New IPC standards were developed. The aim was to provide a renewed focus on IPC and HAI surveillance and to benchmark hospitals against agreed standards.
- However, despite the establishment of the national QI programme, it was clear that there were significant challenges related to the implementation of IPC improvements and that the development of standards and surveillance alone were not sufficient to improve practice at the frontline. A comprehensive framework for HAI prevention would also need to be developed.

Key challenges to HAI prevention in neonatal and paediatric patients

- Implementation of HAI prevention in the South African health care context is complex, with multiple challenges to IPC programmes at the health system, institutional and patient levels. The authors list the following challenges:
 - **Health system challenges:** competing health priorities; high burden of community-acquired infections; few resources for IP implementation; lack of HAI surveillance programmes and reporting; lack of IPC policies; lack of IPC training for health care workers; lack of a coordinated research agenda for HAI prevention.
 - **Institutional challenges:** overcrowding; high patient-to-staff ratios; lack of IPC provisions and consumables; lack of isolation facilities; ageing infrastructure; inadequate environmental cleaning; re-use and sharing of devices and equipment; lack of a patient safety focus and institutional culture.
 - **Patient-level challenges:** malnutrition; human immunodeficiency virus (HIV) exposure and HIV infection; prematurity; chronic diseases; high device utilization rates; high antimicrobial usage.

² Dramowski A, Cotton MF, Whitelaw A. A framework for preventing healthcare-associated infection in neonates and children in South Africa. S Afr Med J. 2017;107(3):192-195.

Questions

1. The problem

In your groups, discuss the problem described by the authors. Summarize in writing what you think was the main problem that needed to be addressed.

FACILITATOR ANSWER NOTES

- The main problem facing the team relates to the local burden of HAI and associated mortality (24% prevalence of HAI).
- HAI incidence was highest in the PICU and PICU device-associated infections were double those reported from PICUs in other low- and middle-income settings.
- Two-thirds of all in-patient mortality occurred in association with HAI, with crude mortality 6-fold higher than among HAI-unaffected hospitalizations.
- A secondary problem is that accurate rates of HAI are hampered by a lack of HAI surveillance and reporting.

2. Identifying key challenges

- Discuss the main challenges to HAI prevention faced by the leaders in South Africa as described above. (These challenges are essentially leadership opportunities.)
- As you discuss these challenges – think about the core components and the multimodal strategy.
- Discuss whether you have faced similar challenges.
- As a group, choose **three of the challenges identified above that you/members of your group have also faced** and write down what action was taken to address these challenges in your own place of work.

Main challenges and actions taken (also replicated on slides)

Challenge	Action
Policies and guidelines	<ul style="list-style-type: none"> • IPC norms and standards for outpatient and inpatient settings developed. • IPC guidelines for paediatric/neonatal wards and clinics developed.
Education, training and advocacy for patient safety	<ul style="list-style-type: none"> • A national core curriculum on IPC for undergraduates developed • In-service training for all health care workers initiated. • IPC champions to lead education, advocacy and research established. • Advocacy and buy-in from managers and departmental heads to prioritize safe care of children agreed upon. • Integration of IPC with existing structures, e.g. quality improvement committees
Provisions and infrastructure	<ul style="list-style-type: none"> • Building norms for new and renovated neonatal and paediatric services established. • Basic provisions for HAI prevention, for example. soap, water, alcohol-based handrub, personal protective equipment agreed upon.

Challenge	Action
Surveillance and research	<ul style="list-style-type: none">• Recommendations for HAI surveillance methods, frequency and targets implemented.• Outbreak reporting established.• Addition of HAI to existing morbidity and mortality registers.• Identification of key research questions to improve HAI implementation.

Annex 3: Group work 2

Instructions

- Work in groups of five to seven people – a facilitator will join each group.
- First, read the summary below based on an article by Nyiratuza et al³.
- Answer the four questions presented at the end in your groups.

Setting

- A quality improvement project was conducted in Gihundwe District Hospital located in the Western Province of Rwanda.
- The hospital has a maternity unit with 36 beds and an average occupancy rate of 90%.
- The unit admits an average of 241 patients and performs 65 caesarean sections per month.
- Before the intervention, the identification of HAI among the post-caesarean section patients was done only by the nurse in charge of the unit. No other members of the team were involved in collecting data on HAI.
- There was no set schedule or routine for her to conduct the process. HAI could be missed when she was not on duty.
- Two criteria were used to identify HAI: pus found in the surgical wound and urinary tract infection. Any HAI discovered was documented in a registration book without any patient details or the type of HAI.
- On a monthly basis, the HAI rate was calculated based on the registration book.
- According to routine reports from the maternity unit, the average HAI rate in 2014, was 1.64 per cent; this rate was significantly lower than rates reported by sub-Saharan African countries (average 7.3%) or developed countries (average 4.8%)^{4, 5, 6}.
- Hospital leadership suspected under-reporting and had no confidence in the data.

A summary of the intervention implemented

- To improve the reporting of HAI rates, an intervention consisting of four main components was developed and implemented.
 - First, the implementing team revised the criteria used to identify HAI in the maternity unit. Before the intervention, the maternity unit only used two criteria to determine HAI: pus and urinary tract infection, likely resulting in under-reporting. For the intervention, clinical staff were asked to use the WHO clinical signs and symptoms tool to identify HAI. A HAI data collection form was created to allow them to record each case.
 - Second, HAI reporting responsibilities were distributed more equally among all maternity unit staff and not only relied solely on one person. For the intervention, they appointed a new person each day to be responsible for checking patients in the unit and completing the data collection form when HAI were detected. The nurse in charge of maternity unit created monthly summary reports based on the collected information. The summary reports were then submitted to the IPC committee and the chief of nursing for analysis and recommendations.
 - Third, they improved record keeping for auditing purposes and a dedicated folder was created to file all completed HAI forms.

³ Nyiratuza A, et al. A quality improvement project to improve the accuracy in reporting hospital-acquired infections in post-caesarean section patients in a district hospital in Rwanda. *On the Horizon*. 2016; 24(4):319-326

⁴ Conroy, K., Koenig, A.K., Yu, Y.H., Courtney, A., Lee, H.J. and Norwitz, E.R. (2012), "Infectious morbidity after Cesarean delivery: 10 strategies to reduce risk", *Review in Obstetrics & Gynecology*, Vol. 5 No. 2, pp. 69-77,

⁵ Chu, K., Maine, R. and Trelles, M. (2015), "Caesarean section surgical site infections in sub-saharan Africa, a multi-country study from Médecin Sans Frontière",

⁶ Mpogoro, F.J., Mshana, S.E., Mirambo, M.M., Kidenya, B.R., Gumodoka, B. and Imirzalioglu, C. (2014), "Incidence and predictors of surgical site infections following caesarean sections at Bugando medical centre, Mwanza, Tanzania", *Antimicrobial Resistance and Infection Control*, Vol. 3 No. 1, p. 25.

- Finally, a guideline on the use of the new HAI surveillance form and new process was created. All midwives and nurses in the maternity unit received repeated training on the new guideline in January 2016. Training was a one-day session and was repeated three times to allow staff from all shifts to participate. In total, 11 out of 12 nurses/midwives in the unit (91.7%) and 12 students in clinical placements were trained on the new process and guideline.
- To measure the accuracy of the routine HAI surveillance report, we created a validation team who collected HAI data for all patients who underwent caesarean sections in the maternity unit during ward rounds. The team used a surveillance form that was adopted from a WHO tool which utilizes clinical signs and symptoms to identify HAI (CDC, 2006⁷; WHO, 2002⁸). This approach has been widely accepted as a valid method to determine infection, particularly in resource-limited clinical settings where laboratory results are not always available (WHO, 2002).
- The same validation team consisted of the head of the maternity unit, the chief nurse and a midwife. All three team members were familiar with the surveillance tool. HAI data collected by the validation team were compared with the HAI rates found in the routine unit reports of the same period. When discrepancies were found, the validation team would audit the concerned patient's file to confirm the final HAI result, verify that proper follow-up had been given to the patient and ensure that documentation was complete. The discrepancy was expressed as the difference between the reported HAI rate in unit report and the validation team rate.

Measurement

- The primary outcome of interest was the discrepancy or difference between the HAI rates detected through routine unit reports and validation team processes.
- The discrepancy of HAI between the routine reports and validation team was measured in the pre- and post-intervention periods for comparison.

Discussion

- The intervention successfully reduced the discrepancy of HAI reporting from 6.5% to 1.9% by using a validated tool with more vigorous criteria to identify HAI, appointing a dedicated person per shift to record HAI, strengthening the reporting processes, and training staff appropriately. With more accurate data, the hospital IPC committee and senior management team were able to make better informed decisions to address hospital acquired infections.
- The shifting from over-reliance on just one person to a team approach appeared to be an important success factor. To create a cohesive team, the authors incorporated the principle of leadership into the project (Kotter, 1995⁹; Banaszak-Holl et al., 2011¹⁰; Berwick, 1996¹¹). Engaging relevant people from the beginning of the project was important. The staff working in the maternity unit was informed of the quality improvement project from its inception, which allowed them to obtain their commitment. They were informed by the nurse in charge of the maternity of the problem magnitude and its impact on the quality of care. Several representatives played a key role in performing the root cause analysis, as well as planning, implementing and evaluating the intervention.
- Open and transparent communication with staff was used to gain their support and manage their expectations.
- Before the intervention, nurses and midwives were not involved in the HAI reporting process. With the new process, the new responsibilities represented extra work for them and some would forget to record HAI data on the form. This presented a big challenge in

⁷ CDC (2006), Outline for Healthcare-Associated Infections Surveillance.

⁸ WHO (2002), Prevention of Hospital-Acquired Infections: A Practical Guide, World Health Organization, Geneva.

⁹ Kotter, J.P. (1995), "Leading change: why transformation efforts fail", Harvard Business Review, Vol. 73 No. 2, pp. 59-67.

¹⁰ Banaszak-Holl, J., Nembhard, I.M.E., Taylor, L. and Bradley, E.H. (2011), "Leadership and management: a framework for action", Shortell Kaluzny's Healthc Manag Organ Des Behav, pp. 40-45.

¹¹ Berwick, D.M. (1996), "A primer on leading the improvement of systems", BMJ, Vol. 312 No. 7031, p. 619.

implementation and increased communications and face-to-face conversations were needed to break down resistance.

- Repeated training and one-on-one sessions were also needed to ensure nurses and midwives were knowledgeable about the new process and guideline.
- Continuous and rigorous follow-up from the nurse in charge of the maternity was needed to keep everyone engaged and informed of progress made.
- The language barrier proved to be another challenge that had to be overcome. The guidelines required translation and interpretation and this increased the time of the improvement project, for example, more time was needed for training.

Questions

3. What behaviour required changing?

Identify the individual, team or organizational behaviour that required improvement and was targeted by the team.

Discuss and write down all the behaviours that were targeted in your opinion.

4. What was the intervention implemented?

Identify the intervention(s) implemented by the team.

Next, **discuss** in your group any of the factors included in the context, innovation and recipients' categories presented in the session.

Reflect whether those factors were barriers or facilitators.

5. How did the authors measure the impact of their intervention?

Now, try to **identify** the different ways used by the authors to measure the impact of the intervention(s).

Then, **discuss** if the indicators used were quantitative or qualitative.

Finally, **write down** if the indicators focused on a process or an outcome.

6. What leadership skills were used to resolve the challenges?

Finally, **focus** on the challenges and difficulties experienced by the team and the approaches that they used to resolve those challenges.

Think about the leadership skills presented in the session and discuss which one(s) may have been required within the approaches.

Sample answers

Question	Sample answer
Behaviour	Under-reporting of HAI. At individual level, there was only one nurse. At the team level, a team approach was absent. At the organizational level, the organization did not value data.
Intervention	<ul style="list-style-type: none"> • Interventions: new ways of reporting; new and standardized definitions; new tools; validation teams; training; guidelines.

	<ul style="list-style-type: none"> • Context: leadership support; buy-in of senior managers; open culture; readiness to change; organizational priority. • Innovation: used existing validated tools – tool acceptance; tools easy to use; tools based on research. • Recipients: team approach; those with power/authority mandated the change (chief nursing officer, head of maternity unit); staff motivated; staff familiar with resources/tools.
<p>Impact measurement</p>	<p>Used quantitative indicators, that is, the difference between HAI rates detected through routine unit reports and the validation team.</p>
<p>Leadership skills used</p>	<p>Elements of transformational and transactional leadership styles - engagement, involvement, communication to secure buy-in, continuous follow-up.</p>