Leadership and programme management in infection prevention and control

2018
Module outline

Leadership and programme management in infection prevention and control (IPC)

**Session 1**: The role of the IPC focal person in developing and implementing IPC programmes. 120 mins

**Session 2**: Becoming an IPC leader – an exploration of what makes an effective leader. 90 mins

**Session 3**: Implementation strategies and behaviour change. 90 mins

**Session 4**: Effective communication in IPC. 45 mins
Summary of the module

Session 1
Introduction to leadership in the context of:
- the core components;
- the multimodal strategy;
- implementation resources;
- project management;
- IPC interlinkages;
- principles of adult learning.

Session 2
Drill-down on IPC leadership:
- what makes a good leader;
- the relevance of leadership to IPC;
- leadership characteristics;
- types of leaders;
- leadership challenges and opportunities.

Session 3
Exploration of implementation and behaviour change:
- implementation success factors;
- behaviour change and implementation;
- quality improvement cycles and implementation;
- leadership challenges and solutions.

Session 4
Focus on communication and advocacy:
- communication skills in IPC;
- choosing the right communication channels;
- leadership and conflict resolution.
The symbols explained

Interactive question
You are encouraged to participate in discussion questions, where you can use your own experience and prior knowledge.

Answers
Some suggested answers to activities/group work.

Group work
You are encouraged to participate in group activities to drill into key topics.

Case study
In-depth case study applying learning into practice.

Key resource
Essential content (not to be missed!).

Video
Video material to supplement learning.

Reference/reading
Key reference for consolidating learning.

Homework
Required reading or reflection outside of the classroom.
Session 1:

The role of the IPC focal person
Competencies

• 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.
Learning objectives

- 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.
Key points

• 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 person**\(^1\) 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.

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\(^1\)IPC focal person is a term used to denote the lead IPC practitioner at every level of the health care system.
Impact of effective IPC

http://www.who.int/gpsc/HAI-Infographic.pdf?ua=1
The core components of an IPC programme

- 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.

http://www.who.int/infection-prevention/publications/core-components/en/
IPC leaders describe the Core Components

[YouTube video link: https://www.youtube.com/watch?v=LZapz2L6J1Q&feature=youtu.be]
Handouts 1 & 2

Refer to handouts 1 & 2 in the student handbook for the next part of the session.
Core component 1

Two high-quality studies show that IPC programmes including dedicated, trained professionals are effective in reducing HAIs in acute care facilities.

- Clearly defined **objectives**.
- Dedicated, trained professionals & multidisciplinary team.
- **Support** from the **facility leadership**.
- Good quality **microbiological laboratory**.
Core component 2

Evidence-based guidelines

Six high-quality studies show that guidelines implemented in combination with health care workers’ education and training are effective in reducing HAI.

• **Expertise** required.

• **Local prioritization**.

• **Providing resources for implementation**.

• **Monitoring** implementation.

• **Health care workers’ (HCWs) education** on recommended practices.
Essential guidelines

The following are considered essential according to the core components

- Standard precautions
- Decontamination
- Safe handling of linen and laundry
- Health care waste management
- Respiratory hygiene and cough etiquette
- Environmental cleaning
- Prevention of sharps injuries
- Hand hygiene

- Transmission-based precautions (including patient identification, placement and personal protective equipment)
- Aseptic technique for invasive procedures (including surgery)
- Device management for clinical procedures
- Sterilization and medical devices decontamination
Core component 3

15 high-quality studies show that a practical hands-on approach incorporating individual experiences is associated with decreased HAI and increased hand hygiene compliance.

- **Pre-graduate, postgraduate, in-service** training.
- **Evaluation** of training impact.
- **Collaboration** with local academic institutions.
13 facility level and one national study showed a decrease in HAI with surveillance and also that timely feedback of results is influential in the implementation of effective IPC actions.

- Standardized definitions, appropriate methods, good quality laboratory support, quality control.
- Training and expertise needed.
44 national and 14 facility level high-quality studies show that implementing IPC activities at facility level using multimodal strategies is effective to improve IPC practices and reduce HAI.

A multimodal strategy comprises several elements or components (three or more; usually five) implemented in an integrated way with the aim of improving an outcome and changing behaviour. It includes tools, such as bundles and checklists, developed by multidisciplinary teams that take into account local conditions.
 IPC focal persons must be able to clearly articulate how the multimodal strategy applies to all IPC activities.
The multimodal strategy in real life

Consider the following scenario

• 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).
Core component 6

Six high-quality facility level and one national study showed that *regular monitoring/auditing of IPC practices paired with regular feedback* is effective.

- To achieve behaviour change or other process modification.
- To document progress and impact.
19 high-quality studies showed that bed occupancy exceeding the facility standard capacity and inadequate HCW staffing levels is associated with an increased risk of HAI.

- Standards for bed occupancy: one patient per bed with adequate spacing between beds.
- HCW staffing levels should be adequately assigned according to patient workload.
- Overcrowding recognized as a public health issue that can lead to disease transmission.
11 studies showed that the availability of equipment and products at the point of care (particularly for hand hygiene) leads to increased compliance with good practices and reduction of HAI.

- Appropriate clean and hygienic environment, water, sanitation and hygiene (WASH) services and materials and equipment for IPC, in particular for hand hygiene.
The core components at-a-glance

Resources are available to support implementation
Implementation resources

- Practical manual to support implementing the core components
- Assessment tools to support baseline and follow-up assessment
- Academic publications to convince senior managers and leaders
- Videos explaining the core components and leadership in IPC
- Advocacy video on IPC, HAI and AMR

http://www.who.int/infection-prevention/tools/core-components/en/
Key roles and tasks of the IPC focal person (1)

- Development, implementation, coordination and evaluation of the IPC programme.
- Development and support of implementation of IPC activities at facility & district level.
- Liaison with relevant hospital/district departments to ensure integration of IPC activities.
- Development, updating, and management of IPC strategies, guidelines and all tools and resources.
- Auditing and monitoring of progress of facility IPC plan.
Key roles and tasks of the IPC focal person (2)

- Development of surveillance systems for HAI, etc. in collaboration with epidemiologists and a surveillance team.
- Interpretation and communication of data on infrastructure and process and practice indicators for decision-makers.
- Sustainability of the IPC workforce through training.
- Awareness-raising of HAI and AMR among the public and health care professionals.
- Advice about IPC supplies, technical specifications and procurement systems.
Project management – an important skill

Understand the role of project management in IPC programmes
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.
What is a project?

A unique process consisting of a set of:

- **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
Developing and executing an action plan requires good **project management** skills:

- Agree timelines.
- Consider budget and resource needs.
- Establish monitoring mechanisms.
- Consider risks to success.
Assessments and situation analysis as a key step of project management (steps 2 and 4)

Infection prevention and control assessment tool (IPCAT2)
- National-level assessment tool.
- Provides baseline and ongoing data for improvement.

Infection prevention and control assessment framework (IPCAF)
- Facility-level assessment tool.
- Provides baseline and ongoing data for improvement.

Hand hygiene self-assessment framework (HHSASF)
- Diagnostic tool for health care facilities.
- Provides baseline and ongoing data for improvement.

http://who.int/infection-prevention/tools/core-components/en/
Example: national level (step 3)

**STEP 3: DEVELOPING AND EXECUTING AN ACTION PLAN**

**MAIN ACTIVITIES**

1. Translate the findings of the baseline assessment into a written action plan (see link below to action plan template) by considering the following:
   
   a. 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").
   
   b. Identifying corresponding action steps and timeframes, including an agreed-upon schedule of reporting, to assess progress according to objectives.
   
   c. Designating lead persons and support staff for each action as necessary.

   - 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.
## An example of a structured IPC action plan

<table>
<thead>
<tr>
<th>Core Component: &lt;insert name of core component&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority gaps identified</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>&lt;List all gaps identified from baseline assessment and prioritized for action&gt;</td>
</tr>
</tbody>
</table>

Gap 1:

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IPC relevant programme interlinkages

Who should IPC link with?
Linkages with other programmes

IPC focal person advocates for IPC across programmes

- Waste management
- Antimicrobial stewardship
- Patient safety
- Water & sanitation
- Policies & guidelines
- Media
- Community engagement
- Hepatitis B/C
- Occupational health
- IPC focal person
- Tuberculosis/HIV
Core components and the principles of adult learning

Understand the principles of adult learning
Understanding the principles of adult learning

A key part of effective training and education

• **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**.
Application to the real world

Think of a recent learning experience

1. What were the aims and outcomes – were they clear?
2. What methods were used to help you learn - how were you encouraged to participate?
3. How were you assessed?
4. How did you evaluate your experience?
5. What feedback was provided to support your learning?
Developing an educational intervention in IPC

Key considerations

- 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.

![Diagram showing Aims, Learning outcomes, Learning methods, Assessment methods, Marking, and Feedback.](Answers)
Supplementary information is available for home reading

Refer to student handbook

- David Kolb’s theory of adult learning.
- Tailoring your teaching to different situations.
- Teaching approaches for IPC.

Leadership saves lives!

Effective leadership and influence in IPC saves lives

You play a critical role in supporting and stimulating the right action at the right time to:

• 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.

We need to influence doctors, nurses, managers and leaders and all disciplines in health care!
Further reading on IPC programmes

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

WHO (2009). A guide to the implementation of the WHO multimodal hand hygiene improvement strategy. 


WHO (2009). A guide to the implementation of the WHO multimodal hand hygiene improvement strategy. 


Further reading on project management

WHO (2004). Planning and implementation of district health services. 
http://www.who.int/management/district/planning_budgeting/PlanningImplementationDHSAFROMd4.pdf?ua=1

WHO (2007) A guide for fostering change to scale up effective health services. 

https://www.iso.org/standard/70376.html

http://apps.who.int/iris/bitstream/10665/69237/2/TDR_RCS_PPE_05.2_eng.pdf?ua=1
Further reading on adult learning


Session 2:

Becoming an IPC leader

An exploration of what makes an effective leader.
Competencies

- 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.
Learning objectives

- 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.
Key points

- **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.
Leadership - a critical success factor

Understand the value of leadership in effective IPC
What would a great IPC leader look like?

Write down what you think are the top three things that a *great* IPC leader does to demonstrate their leadership.

*No right or wrong answers!*

Example:

“A great IPC leader is a good communicator”
Leadership - what are we talking about?

Leadership describes the ability to:
- influence
- motivate and
- enable members of an organization to contribute to the effectiveness and success of the organization.

Leadership - what are we talking about?

The ability to influence, motivate, enable...

The implementation of guidelines into practice

Behaviour change through multimodal strategies
What is the relation between leadership and effective IPC?

- **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

Characteristics of a leader

In your opinion, who is a leader?

- 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?
• 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 to lead.

**Characteristics of an IPC leader**

- **IPC Leader**
  - **Culture**
  - **Personality**
  - **Behaviour**
  - **Actions**
Situational leadership

Adaptable leaders

- 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.

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Transformational leadership

Visionary leaders

- 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)

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[www.pexels.com](http://www.pexels.com) (CC0 License, Free for personal and commercial use, No attribution required)
Transactional leadership

Performance-oriented leaders

- 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**.

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**www.pexels.com** (CC0 License, Free for personal and commercial use, No attribution required)
• **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.

## Group work 1 – how the authors addressed the challenges

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Action</th>
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</table>
| Policies and guidelines                        | • 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 | • 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                  | • 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                      | • 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.  |
Making improvement with limited resources

Refer to student handbook

- Damani highlights three approaches to improve IPC in settings with limited resources:
  - 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.

Further reading & references

(http://www.who.int/gpsc/5may/Guide_to_Implementation.pdf)


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.
Further reading & references


Session 3:

Implementation strategies and behavioural change
Competencies

- 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.
Learning objectives

- 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.
The WHO core components are a **road map** to indicate how IPC can effectively prevent harm due to HAI and AMR.

**Implementation, including effective leadership**, is key to translate guidelines into practices.

- **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.
Implementation and behavioural change strategies

Why these are important for successful IPC

Quality improvement interventions in IPC require individual, team and organizational behaviour change.

Understanding cultural, behavioural, organizational and clinical factors influencing behaviour change is essential for the successful implementation of guidelines and interventions.

Several psychological frameworks have been used to understand how the different factors interplay.
What do we mean by ‘implementation’?

Implementation is the translation of research evidence into clinical, organizational, professional practice. (Ferlie, 2000)

What is required for successful implementation?

**Context**
- **Inner context**
  - Local and organizational
    - leadership support
    - culture
    - organizational priorities
- **Outer context**
  - policy drivers and priorities
  - incentives and mandates
  - networks

How does an understanding of context help implement a sharps safety improvement?
What is required for successful implementation?

**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?
What is required for successful implementation?

**Context**
- Inner context
- Local and organizational
  - leadership support
  - culture
  - organizational priorities
- Outer context
  - policy drivers and priorities
  - incentives and mandates
  - networks

**Innovation**
- Added benefit of the intervention
- Ease of use
- Evidence
  - research
  - clinical
  - experiential
What is required for successful implementation?

<table>
<thead>
<tr>
<th>Context</th>
<th>Innovation</th>
<th>Recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner context</td>
<td>Added benefit of the intervention</td>
<td>Motivation</td>
</tr>
<tr>
<td>Local and organizational</td>
<td>Ease of use</td>
<td>Values/beliefs</td>
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<tr>
<td>- leadership support</td>
<td>Evidence</td>
<td>Goals</td>
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<tr>
<td>- culture</td>
<td>- research</td>
<td>Skills</td>
</tr>
<tr>
<td>- organizational priorities</td>
<td>- clinical</td>
<td>Knowledge</td>
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<td>Outer context</td>
<td>- experiential</td>
<td>Time</td>
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<td>mandates</td>
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<td>- networks</td>
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What is required for successful implementation?

Context
- Inner context
- Local and organizational leadership support
  - culture
  - organizational priorities
- Outer context
  - policy drivers and priorities
  - incentives and mandates
  - networks

Innovation
- Added benefit
- Ease of use
- Evidence
  - research
  - clinical
  - experiential

Recipients
- Motivation
- Values/beliefs
- Goals
- Skills
- Knowledge
- Time
- Resources
- Support
- Opinion leaders
- Power
- Authority

Social, cultural and organizational factors
Process of implementation (for example, plan, evaluate and reflect)
Practical examples: core component 1 (IPC programmes)

Extracts from the Interim Practical Manual supporting national implementation of the WHO Guidelines on core components of infection prevention and control programmes

“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

“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

Outer context

Inner context, innovation and recipients

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

Infection prevention and control

Implementation tools and resources

To succeed in IPC and bring about safer, high quality health care practices, implementation at the point of care is critical. Conceiving and testing field implementation and behavioural change strategies and tools is a key part of WHO’s Infection Prevention and Control (IPC) Global Unit. The team has a very respectable track record in undertaking such work, facilitating adaptation and supporting others to adopt best IPC practices, for example in hand hygiene improvement, across a wide range of health care settings in many countries. Looking to the future, development and maintenance of implementation plans to translate recommendations into practice must be a key focus for everyone. IPC tools and resources made available by WHO are associated with a multimodal implementation approach that integrates IPC best practices within an improved safety and organizational culture. This approach has been shown to succeed in making the change that people want to see in health care.

Hand hygiene

- Hand hygiene

Injection safety

- Injection safety

Other Interventions

- Other interventions

Surgical site Infections

- Surgical site infections

Core components for IPC

- Core components for IPC

http://www.who.int/infection-prevention/tools/en/
Supporting implementation

**ONE** System change
Alcohol-based hand rubs at point of care and access to safe continuous water supply, soap and towels

**TWO** Training and education
Providing regular training to all health-care workers

**THREE** Evaluation and feedback
Monitoring hand hygiene practices, infrastructure, perceptions, & knowledge, while providing results feedback to health-care workers

**FOUR** Reminders in the workplace
Prompting and reminding health-care workers

**FIVE** Institutional safety climate
Individual active participation, institutional support, patient participation

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

1. **Build it** (system change)
   - What infrastructures, equipment, supplies and other resources (including human) are required to implement the intervention?
   - Does the physical environment influence health worker behaviour? How can socio-economic and human factors approaches facilitate adoption of the intervention?
   - Are certain types of health workers needed to implement the intervention?
   - Practical example: when implementing hand hygiene interventions, ease of access to liquid soap at the point of care is a significant consideration. Are these facilities always accessible in the workplace? If not, action is needed.

2. **Teach it** (training & education)
   - Who needs to be trained? What type of training should be used to ensure that the intervention will be implemented in line with evidence-based policies and how frequently?
   - Does the facility have trainers, training jobs, and the necessary equipment?
   - Practical example: when implementing hand hygiene interventions, ease of access to liquid soap at the point of care is a significant consideration. Are these facilities always accessible in the workplace? If not, action is needed.

3. **Check it** (monitoring & feedback)
   - How can you identify the gaps in PC practices or other indicators in your setting to allow you to prioritise your interventions?
   - How can you be sure that the intervention is being implemented correctly and safely? Is there any evidence available to support this practice?
   - How will you provide feedback to the target audience and managers? How can patients also be informed?
   - Practical example: when implementing surgical site infection interventions, the use of key tools such as impact form and PC training, influence hand hygiene adherence rates and the WHO checklist (adapted to local conditions)

4. **Sell it** (reminders & communications)
   - How are you promoting an intervention to ensure that there are moves to action at the point of care and interventions are monitored to health workers and patients?
   - Do you have expertise to develop promotional messages and materials?
   - Practical example: when implementing interventions to reduce patient admission bloodstream infection, the use of visual cues to action, communication, reminding messages and planning for promotion campaigns are important considerations.

5. **Live it** (culture change)
   - Is there demonstrable support for the intervention at every level of the health system? For example, does the health manager provide the promotion and other resources? Are they willing to be champions and role models for IPC improvement?
   - Are health workers involved in the promotion or adoption of the intervention? Are they empowered and do they feel empowered and the need for non-compliance?
   - Practical example: when implementing hand hygiene interventions, the way that a health facility approach this as part of safety and quality improvement and the value placed on hand hygiene improvement as part of the clinical workflow are important considerations.

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Handout 3
Example of successful implementation using a multimodal strategy

**Context**

- December 2006-08, 55 departments in 43 hospitals in Costa Rica, Italy, Mali, Pakistan, and Saudi Arabia.
- **WHO hand hygiene multimodal strategy.**

**Innovation**

- Intervention launch endorsed by the Minister of Health.
- Increased dispensers at point of care.

**Recipients**

- WHO hand hygiene multimodal strategy.

**Summary**

Background: Hand health care associated infections are a major threat to patient safety worldwide. Transmission is mainly via the hands of health care workers, but compliance with recommendations is usually low and improvements in compliance are needed. We assessed effective WHO's strategy for improvement of hand hygiene in five countries.

Methods: We did a quasi-experimental study between December 2006 and December 2008, at six pilot sites (55 departments in 43 hospitals in Costa Rica, Italy, Mali, Pakistan, and Saudi Arabia). A stepwise approach of four 3-6 month phases was used to implement WHO's strategy and we assessed the hand-hygiene compliance of health care workers and their knowledge. In questionnaire, of microbial transmission and hand hygiene. We expressed compliance as the proportion of predefined opportunities not be hand-hygiene actions (i.e., handwashing or hand rubbing). We assessed long-term sustainability of one strategy activity in April 2008.

Findings: We noted 2,846 hand hygiene opportunities during 162 sessions before the introduction and 2374 opportunities during 784 sessions after. Overall compliance increased from 51.0% before the intervention (CI 45.1-56.9) to 67.0 (CI 61.4-72.4). Compliance was independently associated with lower national income per head, with a greater effect of the intervention in low-income and middle-income countries (odds ratio OR: 4.57. 95%CI 1.16-18-09 (p=.001)) than in high-income countries (2.79 5-03-17 9.01). Implementation had a major effect on compliance of health care workers across all sites after adjustment for country differences (OR: 1.15 1.09). Higher hand hygiene compliance was seen in higher average score from 18.7 to 24.8 (CI 17.8-26.7 to 24.7 27-31.4) with educational sessions. 2 years after the intervention, all sites reported ongoing hand hygiene activities with sustained or further improvement, including national scale up.

Interpretation: Implementation of WHO's hand hygiene strategy is feasible and sustainable across a range of settings in different countries and leads to significant hospital and knowledge improvement in health care workers, supporting recommendation from worldwide.

**Introduction**

Health care associated infections are one of the most frequent causes of patient safety worldwide. According to WHO estimates, hundreds of millions of patients are affected each year, leading to substantial morbidity, mortality, and financial losses for health systems. In 2007, a survey of 19 countries found that 10% of patients admitted to hospital in high-income countries and about 15% of those in low-income and middle-income countries were infected. More than 4 million patients are affected every year in Europe, and 10 million deaths occur because of this infection. According to the US Centers for Disease Control and Prevention (2006), at least 1.7 million episodes of healthcare-associated infections are transmitted in hospitals in the USA, leading to at least 99,000 deaths. Annual costs were estimated to be as high as $12 billion in Europe and US $6.8 billion in the USA. Hand hygiene is the most effective measure to prevent pathogen transmission during health care delivery. Compliance of health-care workers with best practices varies between settings and countries, but is usually low and insufficient to control patient safety. WHO issued draft guidelines in 2006 to provide evidence and recommendations for improvement of hand hygiene. These guidelines were based on successful experiences showing a consequent reduction in healthcare-associated infections at institutional and regional levels. Because dissemination of guidelines alone is insufficient to change practice, WHO developed a nationwide implementation strategy and accompanying methods for hand hygiene, which were then used in hospitals worldwide. We assessed the effect of implementation of WHO's hand hygiene strategy on a range of indicators, including hand hygiene, knowledge, and hand hygiene compliance with the local context and available resources.

**Methods**

Study design: We did a quasi-experimental study between December 2006 and December 2008, at six pilot sites (55 departments in 43 hospitals in Costa Rica, Italy, Mali, Pakistan, and Saudi Arabia). We implemented WHO's strategy.
Revisiting wasteful and unnecessary practices

(Refer to the student handbook for the full list)

- Routine environmental swabbing
- Routine use of disinfectants for environmental cleaning
- Unnecessary use of injections
- Overuse of antibiotics
- Overuse of urinary catheters

These are ALL behaviours
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.
What would you like to do?

1. Identify behaviour that needs addressing

Can be used for any IPC-related behaviour to identify what action is needed to address capability, opportunity and motivation of health workers.

- **CAPABILITY**
  - Psychological/physical ability

- **MOTIVATION**
  - Plan, believe, want

- **OPPORTUNITY**
  - Physical, environmental, social

How can we influence HCW capability, motivation and opportunity to do the right thing?

1. IDENTIFY BEHAVIOUR

- Do HCWs know the moments for hand hygiene?
- Do they know the correct technique?

2. MOTIVATION

- Do HCWs believe the evidence that hand hygiene works?
- Is there a campaign and reminders to promote hand hygiene?

3. CAPABILITY

- Is handrub available at the point of care?

4. OPPORTUNITY

- Is there a system for replenishing empty bottles?
- Do the sinks work?
What would you like to do?

2. Design your intervention

1. IDENTIFY BEHAVIOUR

2. DESIGN INTERVENTION

What would you like to do?

Focus on the ‘red’ part of the behaviour change wheel

2. DESIGN INTERVENTION

- Education = knowledge
- Persuasion = communication
- Incentives = reward
- Coercion = punishment
- Training = skills
- Restriction = limits
- Environmental restructuring
- Modelling = role model
- Enablement = barriers

Identifying measures in optimal injection safety

<table>
<thead>
<tr>
<th>Measure to be used</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong> = knowledge</td>
<td></td>
</tr>
<tr>
<td><strong>Persuasion</strong> = communication</td>
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<td></td>
</tr>
<tr>
<td><strong>Enablement</strong> = barriers</td>
<td></td>
</tr>
</tbody>
</table>

What would you like to do?

Focus on the ‘grey’ part of the behaviour change wheel

2. DESIGN INTERVENTION

Communication/marketing
Legislation
Service provision
Regulation
Fiscal measures
Guidelines
Environmental/social planning

Implement intervention

The WHO five-step cycle

3. IMPLEMENT INTERVENTION

Step 5: Sustaining the programme over the long-term
Step 4: Evaluating impact
Step 3: Developing and executing the plan
Step 2: Baseline assessment
Step 1: Preparing for action

Multimodal improvement strategy embedded within each step in the cycle of continuous improvement

Interim Practical Manual supporting national implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes

Based on the validated approach to implementation developed in relation to the WHO guidelines on hand hygiene in health care (2009)
The five implementation steps

<table>
<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 a 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>
How this fits together

1. IDENTIFY BEHAVIOUR
   - Context
   - Innovation
   - Recipients

2. DESIGN INTERVENTION
   - National and facility IPC assessment tools
   - Project management

3. IMPLEMENT INTERVENTION

- National & facility IPC assessment tools

Steps:
- Step 1: Preparing for action
- Step 2: Baseline assessment
- Step 3: Developing and executing the plan
- Step 4: Evaluating impact
- Step 5: Sustaining the programme over the long-term

Multimodal improvement strategy embedded within each step in the cycle of continuous improvement.
The use of quality improvement methods

(For example, Plan-Do-Study-Act [PDSA] cycle)

PDSA cycles are ideal for small, frequent tests of ideas before making larger, system-wide changes.

They can be used in adjunct with other quality improvement approaches.

The United States Institute for Healthcare Improvement incorporates PDSA cycles as part of its model to accelerate improvement.

*PDSA Cycle graphic used courtesy of The W. Edwards Deming Institute®


What behaviour required changing?

What was the intervention implemented?

• Could you identify context, innovation and recipients?

How was impact measured?

What leadership skills were used to resolve the challenges?

Nyiratuza A et al. (2016) "A quality improvement project to improve the accuracy in reporting hospital acquired infections in post cesarean section patients in a district hospital in Rwanda", On the Horizon, Vol. 24 Issue: 4, pp.319-326,
## Summary answers

<table>
<thead>
<tr>
<th>Question</th>
<th>Sample answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behaviour</strong></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><strong>Intervention</strong></td>
<td>• <strong>Interventions:</strong> new ways of reporting; new and standardized definitions; new tools; validation teams; training; guidelines.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Context:</strong> leadership support; buy-in of senior managers; open culture; readiness to change; organizational priority.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Innovation:</strong> used existing validated tools – tool acceptance; tools easy to use; tools based on research.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Recipients:</strong> 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><strong>Impact measurement</strong></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><strong>Leadership skills used</strong></td>
<td>Elements of transformational and transactional leadership styles - engagement, involvement, communication to secure buy-in; continuous follow-up.</td>
</tr>
</tbody>
</table>
Key literature


Session 4:

Effective communication and advocacy
Competencies

• 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.
Learning objectives

• 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.
Effective communication is a critical part of IPC leadership. Many IPC situations require effective interpersonal communication, for example:

- implementing a new innovation
- dealing with infection outbreaks, epidemics, emergencies…
- Providing information and modifying behaviours of professionals and patients demands effective communication.
What is communication?

The deliberate or accidental transfer of information

Essentially, communication is likely to include thoughts or feelings. (Pearson J et al, 2000)

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.

Using communication skills in IPC

- Can you think of any IPC situation where you had to use communication skills?
- What worked well and what was challenging?
Can you think of any IPC situation where you had to use communication skills?

- 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).
Seven key elements are essential in the process of communicating information.

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
Communication channels
(Not exhaustive)

- 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

(Edwards 2012)
Communication channels

Which channel works best in the following situations?

- 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.
## Communication channels

### Sample answers

<table>
<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>
Managing conflicts in IPC

Introducing change may sometimes result in conflict

- 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.

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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.
Resolving conflicts constructively

Plan and prepare the environment and the people involved

1. Choose the right moment.
   - Avoid distractions, be prepared and able to spend time discussing.

2. Focus your attention on ‘active listening’.
   - Take turns to speak, summarize and paraphrase each intervention

3. Set a goal of finding a solution.
   - Work together and think of ‘win-win’ outcomes.

4. Identify what is needed for all the parties involved.
   - Aim to resolve each issue affecting each party, empathise.

5. Disentangle cognitive and emotional aspects of the conflict.
   - Disagree about ideas or approaches, but do not personalise.
Reference and further reading


References and further reading


Recap on key points

**Session 1**
Introduction to leadership in the context of:
- the core components;
- multimodal strategy;
- implementation resources;
- project management;
- IPC interlinkages;
- principles of adult learning.

**Session 2**
Drill-down on IPC leadership:
- what makes a good leader?
- relevance of leadership to IPC;
- leadership characteristics;
- types of leaders;
- leadership challenges and opportunities.

**Session 3**
Exploration of implementation and behaviour change:
- implementation success factors;
- behaviour change and implementation;
- quality improvement cycles and implementation;
- leadership challenges and solutions.

**Session 4**
Focus on communication and advocacy:
- communication skills in IPC;
- choosing the right communication channels;
- leadership and conflict resolution.
Thank you

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