### Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AMR</td>
<td>antimicrobial resistance</td>
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<tr>
<td>APIC</td>
<td>Association for Professionals in Infection Control and Epidemiology</td>
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<tr>
<td>APSIC</td>
<td>Asia–Pacific Society of Infection Control</td>
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<tr>
<td>BARN</td>
<td>Baltic Antibiotic Resistance Collaborative Network</td>
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<tr>
<td>EUCIC</td>
<td>European Committee on Infection Control</td>
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<tr>
<td>GIPCN</td>
<td>Global Infection Prevention and Control Network</td>
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<tr>
<td>GLASS</td>
<td>Global Antimicrobial Resistance Surveillance System</td>
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<td>GOARN</td>
<td>Global Outbreak and Response Network</td>
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<tr>
<td>ICAN</td>
<td>Infection Control Africa Network</td>
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<tr>
<td>IFIC</td>
<td>International Federation of Infection Control</td>
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<tr>
<td>IPC</td>
<td>infection prevention and control</td>
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<td>IPC-GU</td>
<td>Infection Prevention and Control Global Unit</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
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<tr>
<td>US CDC</td>
<td>United States Centers for Disease Control and Prevention</td>
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<tr>
<td>WASH</td>
<td>water, sanitation and hygiene</td>
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BACKGROUND

WHO guidelines on core components of infection prevention and control (IPC) programmes at the national and acute health care facility level were issued in November 2016 by the IPC Global Unit (IPC-GU). The Unit was established at the end of 2015 in the WHO department of Service Delivery and Safety to increase national and international IPC capacity and to encourage integration of IPC best practices within health service delivery.

Ineffective IPC affects a country’s ability to comply with the International Health Regulations (2005) (IHR) in combatting antimicrobial resistance (AMR) and affects the quality of health care required to meet the health-related Sustainable Development Goals (SDGs), 3.1–3, 3.8, 3.d and 6. The mandate of the IPC-GU is to lead and coordinate WHO’s work on IPC in collaboration with other units in Service Delivery and Safety, other departments in WHO, the WHO regional offices, other international organizations, stakeholders and donors. The vision, mission and functions of the IPC-GU are described on its website and in the booklet “Health care without avoidable infections. The critical role of infection prevention and control”.

As part of its coordination function, the IPC-GU coordinates the Global Infection Prevention and Control Network (GIPCN), which brings together the major international organizations and WHO collaborating centres on IPC. The Network initially held meetings and worked collaboratively on a web-based platform. It is now coordinated by the IPC-GU, in liaison with the WHO Antimicrobial Resistance secretariat and the WHO Infectious Hazard Management Department, specifically the clinical management unit.

The second meeting of the WHO GIPCN was held on 29–30 August 2018 at WHO headquarters, Geneva, Switzerland. The purpose of the meeting was to exchange information on the progress of the participating organizations in achieving the priorities defined in 2017. The discussions were to focus on training activities in IPC and on the provision of technical support, particularly to low-and middle-income countries. See Box 1 for the specific meeting objectives and Box 2 for expected outputs.

Box 1. Specific meeting objectives

- To share progress and current plans of the GIPCN participating organizations according to the priorities identified in 2017
- To review existing IPC training approaches and activities based on a preparatory mapping exercise conducted before the meeting
- To identify IPC training needs in different parts of the world and resulting strategies and actions necessary across the network to start to meet such needs and to increase synergies on training among GIPCN participating organizations
- To review ongoing support and technical expertise provided to countries by GIPCN participating organizations, including understanding of their strategic approaches
- To identify common approaches and possible synergies to join and integrate efforts to optimize IPC country capacity building in line with the call to action.

1 http://apps.who.int/iris/bitstream/handle/10665/251730/9789241549929-eng.pdf;jsessionid=74BADC4646B5B058D156A60BE558E30C?sequence=1
2 https://sustainabledevelopment.un.org/sdgs
3 http://www.who.int/infection-prevention/en/
4 http://apps.who.int/iris/bitstream/handle/10665/246235/WHO-HIS-SDS-2016.10-eng.pdf?sequence=1
5 https://www.who.int/infection-prevention/about/GIPCN-meeting-feb2017.pdf
1. OPENING OF THE MEETING

The meeting was opened by Benedetta Allegranzi, head of the IPC-GU programme, and Marc Sprenger, Director of the Antimicrobial Resistance programme at WHO. The session was chaired by Katie Wilson, Centers for Disease Control and Prevention, USA (US CDC). It was agreed that all slide presentations would be made available to all participants.

Marc Sprenger provided a broad picture of work on AMR at WHO, including the Global Antimicrobial Resistance Surveillance System (GLASS) and WHO regional networks. He recalled that the main cause of AMR is misuse of antibiotics. Although some countries have programmes for proper use of these drugs, the main preventive measures are water, sanitation and hygiene (WASH) and IPC. National action plans are essential to introduce these measures, to prevent release of antibiotics in sewage, agriculture and manufacturing waste, to ensure that all facilities have access to water and to empower nurses to practise IPC.

Benedetta Allegranzi said that the meeting should provide tangible, concrete options for collaboration in training and support for countries in IPC. The discussions should indicate the needs of countries for training and the real opportunities for support from member organizations.

She made a presentation on the aims, terms of reference and roles of the GIPCN. IPC has an important role in achieving the SDGs and furthering the WHO 13th Programme of Work, and that role should be emphasized in order to attract funding and commitment. She explained the “multimodal hand hygiene improvement strategy”, which is essentially a simple concept, and asked for suggestions on better communicating it. She noted that there is increasing recognition of the importance of IPC and increasingly productive collaboration with other programmes. The challenges are ensuring that IPC is maintained on the high-level political agenda, bringing together the scattered capacity and expertise in IPC, ensuring adequate budgets and extending the dissemination and reach of normative guidance.

Astrid Wester, WASH Unit, WHO, urged participants to increase the focus on IPC by contacting their national representatives to the World Health Assembly to ensure a global framework for the development and stewardship of IPC. They could also have input by commenting on the recommendations to the United Nations Secretary-General of the Interagency Coordination Group on Antimicrobial Resistance, which are to be sent out for public consultation in the immediate future.

Neelam Dhingra, Coordinator, Patient Safety and Risk Management, WHO, made a presentation in which she described the strategic priorities of her department, which are to

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**Box 2. Expected meeting outcomes**

- A meeting report with specific Appendices as mentioned below, including status of GIPCN activities and plans for future collaborations
- A report Appendix regarding existing IPC training activities and opportunities provided by GIPCN participants, including description of similarities and gaps
- A dedicated WHO web page featuring links to existing IPC training opportunities
- A map of current GIPCN participants’ activities in countries
- A report Appendix identifying common approaches to country support and possible areas for collaboration and synergy
ensure medication without harm, participation in ministerial summits, networking and consultation, building capacity in leadership, education and research in low- and middle-income countries and annual observance of World Patient Safety Day. An important challenge is misuse of medicines. She listed the many ministerial summits at which those issues have been addressed and the partnerships that exist to ensure patient safety.

Julie Storr, Consultant, IPC-GU, gave a rapid overview of two WHO IPC- and quality-related networks. The first is a network related to WHO integrated, people-centred health services. The second is the global learning laboratory for quality universal health coverage. She said that creating an enabling environment can empower and engage people, strengthen governance and accountability, reorient the model of care and coordinate services within and among sectors. She listed the current platforms for increasing the quality of care, changing management practices, ensuring health information for all and building communities of practice.

Devika Dixit, Infectious Hazard Management, WHO, described IPC in health emergencies, which involves all three levels of WHO. WHO’s core commitments in emergencies and measures to ensure integrated management of emergency services, including IPC were listed. It was noted that once an emergency is deemed to be under control, teams then focus on strengthening the country’s health system and preparedness. Compliance with IPC is facilitated by effective risk communication strategies and interfacing with community engagement. WHO documents on health facility preparedness are being updated. In addition to supporting normative work, proposed areas of engagement for which GIPCN could support health emergencies include training for response and preparedness and the Emerging Diseases Clinical Assessment Response Network for deployments via the Global Outbreak and Response Network (GOARN). In addition, there is a need to develop a register of IPC experts available for deployment during emergencies.

Sergey Eremin, Antimicrobial Resistance, WHO, presented the “road map” for revision of the GLASS manual and described the associated activities. Future plans include greater representation, with more data for policy, enhanced monitoring of antibiotic consumption, research on invasive fungal infections, the burden of AMR-associated disease and the relations between AMR, antimicrobial use and health care-associated infections.

Anthony Twyman gave a presentation on the results of a survey on available training opportunities and country support, which will form the basis of a GIPCN inventory of available training materials and country support activities by GIPCN members. See Annex 3 for a summary of the findings of the survey.

2. TRAINING ACTIVITIES BY GIPCN MEMBERS

Organizations that participate in GIPCN made presentations on the international IPC training or training opportunities that they provide. A list of currently available courses by GIPCN members will be created on the GIPCN webpages on the WHO website at: https://www.who.int/infection-prevention/about/gipcn-organizations/en/

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6 https://www.who.int/servicedeliverysafety/areas/people-centred-care/en/
7 https://www.who.int/servicedeliverysafety/areas/qhc/gll/en/
The organizations were:

- the Institute of Epidemiology, Disease Control and Research, a Government office in Dhaka, Bangladesh. In answer to a question, Dr Mushtuq Husain said that, although no training was currently conducted in other countries, the Institute had high-quality resources that could be shared internationally.

- the Association for Professionals in Infection Control and Epidemiology (APIC). In answering questions, Katrina Crist said that APIC charged fees for the training courses, for which participants received a credential of demonstration of competence, not certification. The courses are, however, accredited in the USA and widely available online.

- the Asia–Pacific Society of Infection Control (APSIC). Moi Lin Ling said that their course in basic infection control is open to anyone involved in IPC in all countries in the region. Participants are charged a fee; however, most participants are sponsored by their institutions. Part of the standard curriculum involves visits to hospitals for onsite practical exercises.

- the Baltic Antibiotic Resistance Collaborative Network (BARN). The Network organizes interactive workshops, lectures and group discussions on improving compliance with guidelines on hand hygiene, reducing catheter-associated urinary tract infections and core components of IPC. They also map routines and structures in hospitals during study visits. There is no examination, but certificates are issued. Birgitta Lytsy commented that changing behaviour is more difficult than basic training.

- the national IPC programme of the Government of Chile. Fernando Otaiza O’Ryan said that, after training, participants were given exercises by outbreak specialists at annual meetings, and visits were made to hospitals to determine compliance with IPC methods.

- the European Committee on Infection Control (EUCIC). Nico T. Mutters, responding to questions, said that within the two-year pan-European programme, courses are given when 15 or more doctors or nurses with a university or PhD degree have signed up. Currently 36 participants are following the whole training programme. They complete 10 modules, similar to a master’s degree, with interim tests, before a final examination.

- the University Hospital in Geneva, a WHO Collaborating Centre on Patient Safety. Daniela Pires said that courses are given in French, English, Portuguese and Spanish. Several financing schemes are available, including support from The Netherlands and companies interested in IPC.

- the Infection Control Africa Network (ICAN). Folasade Ogunsola said that the ultimate aim of ICAN is to provide training in all the countries of Africa. ICAN currently provides a basic IPC course for health care workers and managers and training of trainers in English. So far, only a few countries provide certificated training. Most trainings are face to face but ICAN also has two online training platforms, the ECHO platform and the ICAN Virtual learning platform which have increased its reach to previously inaccessible sites including the Democratic Republic of the Congo. Short courses are available for health workers, paid for by their hospitals or out of pocket.

- the International Federation of Infection Control (IFIC). IFIC conducts a behavior change course based on the IFIC publication *Basic Concepts of Infection Control, 3rd Edition*
(2016) at no cost to participants. Available online, IFIC provides a Basic Infection Control Training Programme with specific modules (e.g. Outbreak Management, Bloodborne pathogens) suggested for various disciplines of the health workforce including IC teams, nurses, administrators, and health care students. Mentoring/Twining scholarships are also available and IFIC membership is accessible as annual membership fees are waived for low resource countries.

- Babacar Ndoye reported on WHO-supported training in francophone Africa. Advanced training on IPC with the WHO new curriculum was conducted in November 2017 in Dakar, Senegal, for senior-level national IPC executives and teaching hospitals from 10 French-speaking African countries. The objective was to train managers of IPC programmes at national and operational levels. Training has also been conducted on methods for elaborating, implementing and monitoring national action plans on AMR in June 2017 in Douala, Cameroon, and Lome, Togo. Programmes are under way to train observers from hospitals in Senegal on auditing and observation of hand hygiene. Advanced training on IPC is also needed in Central and East francophone countries, and all sub-Saharan francophone Africa required support in in implementing national IPC programmes.

- Jhpiego. Chandrakant Ruparelia recalled that IPC had been a key component of all seven domains of Jhpiego’s work for 45 years and is integrated into its programmes.

- the School of Nursing, University of São Paulo, Brazil. Maria Clara Padoveze added that exchanges could be made with Portuguese- and Spanish-speaking countries in Africa.

- the Public Health Agency of Canada. Kathy Dunn said that most of the training offered by the Centre for Infection Control and Communicable Diseases consists of high-level courses, which are conducted by national societies rather than Government institutes.

- the North-western State Mechnikov Medical University. Batyzbek Aslanov reported that training is provided not only in the Russian Federation but also in neighbouring countries.

3. DISCUSSION OF TRAINING NEEDS AND OPPORTUNITIES

Julie Storr facilitated this session and asked the participants to separate into three groups to discuss training needs and opportunities. She recalled the recommendations on training as a core component for effective IPC programmes and the key remarks on training requirements and effective approaches from the guidelines. She asked participants to discuss the current gaps and opportunities for IPC training worldwide, on the basis of their experience, activities and agreed GIPCN priorities.

Table 1. Gaps and opportunities as it relates to IPC training and GIPCN priorities

<table>
<thead>
<tr>
<th>Gaps</th>
<th>Opportunities</th>
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<tr>
<td>awareness about existing international IPC training resources;</td>
<td>an international IPC certificate;</td>
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<tr>
<td>courses in different languages;</td>
<td>translation of training materials, guidelines and documents or multi-language subtitles;</td>
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<tr>
<td>identification of target trainees and resources;</td>
<td>standardization of certificates of competence in IPC;</td>
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<tr>
<td>courses for IPC professionals by level of competence and definition of basic and advanced courses;</td>
<td>use of the competencies document of the European Centre for Disease Prevention and Control as a model;</td>
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<tr>
<td>recognition of IPC as a specialty;</td>
<td>political support from WHO for IPC as a specialty;</td>
</tr>
<tr>
<td>the necessary content of training courses;</td>
<td>list of available training, with quality control; new WHO training package (<a href="https://www.who.int/infection-prevention/tools/core-components/en/">https://www.who.int/infection-prevention/tools/core-components/en/</a>);</td>
</tr>
<tr>
<td>standardization of training;</td>
<td>a global summit on training in IPC;</td>
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<tr>
<td>understanding the best modality for training, including on the Internet;</td>
<td>training tools, guidance and self-assessment of competence;</td>
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<tr>
<td>access to training;</td>
<td>library of training resources;</td>
</tr>
<tr>
<td>needs assessments for regions and countries; and</td>
<td>indicators of the quality of courses;</td>
</tr>
<tr>
<td>sustainability of training.</td>
<td>increased influence and visibility of IPC staff and their expertise;</td>
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<tr>
<td>commitment of time by trained IPC professionals.</td>
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In the plenary discussion, participants commented that training in IPC should be assured by governments as part of primary health care and human resources for health, and records should be kept of how many people have been trained and could be deployed. The GIPCN could create an inventory of training materials online and set standards; however, job-specific training should be organized in hospitals.

In the ensuing discussion, participants emphasized the role of the Network in standardizing training and in identifying target trainees. It could also serve as a repository of quality-assured, tested training materials and modalities and provide an online platform for training, with guidance for trainers and a selection of good textbooks on IPC.

Benedetta Allegranzi described an ongoing WHO headquarters training project, preparing a global advanced IPC training package comprising ten advanced training modules for professionals interested in becoming IPC focal points, which can be used in any country but includes special focus on low-income settings. The goal is to provide a complete package of modules with the associated resources, including trainer guides, student handbooks, videos and other supplemental aids for use by countries. The modules will also be available in e-learning versions.

There was consensus that a dedicated page be posted on the GIPCN website for training. Julie Storr added that the inventory of courses would include a disclaimer that WHO does not endorse any of them or guarantee their quality. She suggested that the inventory take the form of a “Google doc”, which could be updated constantly. With regard to the

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availability of trainers, members of the GOARN might be approached, and potential trainers could volunteer on the website.

Translation at WHO is costly and lengthy, and she suggested that GIPCN members could check translations for technical accuracy; alternatively, they could publish translations, which would not, however, bear the WHO logo. The representative of APIC proposed that her organization could help in organizing translations of courses once they understood the priorities for translation and training. Julie Storr added that questions of intellectual property might be raised if fee-based training was shared on the website.

Arabella Hayter, WASH, WHO, presented WASH national packages for training. In response to the call for strengthening WASH in health care facilities (HCF), a target aligned with the SDG 2030 agenda was established. The target is to have basic WASH services in 50% of all HCF globally and in each SDG region by 2022 and 80% by 2025 with the ultimate aim of 100% by 2030. National level activities to achieve this include embedding WASH indicators in health monitoring and conducting cost analyses with implementation at facility/community-level including infrastructural improvements, empowering and training staff, and engaging and empowering the community. Strong leadership and governance accountable to communities are critical to set national targets, define the roadmap, and support the package of work.

An Caluwaerts, Médecins Sans Frontières (MSF) noted that MSF admitted 750,00 patients to its facilities in 2017 and carried out 110,000 interventions. MSF has adapted the WHO IPC model to its own setting. IPC within MSF focuses on standardization, simplification, and a focus on what MSF consider “the essentials”. This includes organisational aspects, the hospital environment, ancillary services and diagnostics. But it also includes the three pillars of hand hygiene, cleaning and disinfection (of the environment and reprocessing of reusable medical devices), and transmission-based precautions including appropriate isolation and ventilation facilities when indicated). MSF operates a stepwise improvement approach for IPC with 5 levels and shared that the organisation is looking for IPC professionals to work on a number of projects.

4. COUNTRY SUPPORT PROVIDED BY GIPCN MEMBERS

On the second day of the meeting, João Toledo, WHO Regional Office for the Americas, took the chair.

Representatives of five of the WHO regional offices made presentations on their work in supporting countries in IPC.

Ana Paula Coutinho Rehse presented the work at the WHO Regional Office for Europe. In the discussion that followed her presentation, the importance of facility assessments was raised. Countries could identify facilities that were ready for self-assessment, which could be based on a proof-of-principle study. The outcome should be used to improve practices.

Maha Tallat described country support provided by the WHO Regional Office for the Eastern Mediterranean. She said that IPC is not a priority, and few countries have IPC guidelines, standardized surveillance, training or monitoring and evaluation. The Regional Office is giving support to countries that have no IPC programme or structure. It uses a cascade approach to training, whereby medical faculty members train “master trainers”, who then train infection control teams. She proposed that GIPCN members visit the countries in the Region and advise them on IPC.
João Toledo, WHO Regional Office for the Americas, added that many countries in the Region had slightly different guidelines for IPC. The Regional Office has a syllabus for training, and training is often provided only at the time of outbreaks.

Richard Brown, Thailand Country Office, representing the WHO Regional Office for South-East Asia, made a presentation on the work of the Regional Office and noted that a responsible officer for IPC was due to be recruited. The plans for providing IPC support in 2018–2019 are an expert consultation on clean, safe health facilities and integration of IPC into AMR and other initiatives. He said that he looked forward to reporting back on the outcome of the present meeting.

Nino Dayanghirang, WHO Regional Office for Africa, that the approach of the Health Systems and Services Cluster at the Regional Office, for building robust, resilient health systems was based on collaboration with multiple partners and a cross-cutting approach (of different technical programs) that focuses on country needs. The broader context is to contribute to the achievement of universal health care and the SDGs. One such example is the ongoing work between HQ, AFRO, and Inter-Country Support Teams to strengthen Quality and IPC in healthcare as functional capacities for emergency preparedness and management. A regional meeting on strengthening health systems is held annually for directors of planning in ministries of health and others.

Paul Rogers, Programme Manager, IPC-GU, said that country capacity-building in IPC is approached through “One WHO”, with contributions at country, regional and global levels. The focus of interventions is to ensure a real impact and an enabling environment.

Benedetta Allegranzi added that implementation manuals are available for use both nationally and in facilities, which describe a stepwise approach for addressing the core components for countries, to ensure that attention is paid to the highest priorities. IPC-GU would welcome input to make the manuals more useful. In response to a question about the identity of donors, she explained the lengthy procedure necessary for WHO to accept donations from private sources.

Organizations that participate in GiPCN made presentations on the country support in IPC that they provide. The organizations were:

- the US CDC. Katie Wilson, replying to questions, said that sustainability is ensured by building capacity before programmes are scaled down after 5 years. Collaboration with the Africa CDC is just beginning.

- ICAN. Folasade Ogunsola described the work of ICAN, which includes education, building IPC capacity in member countries, advocacy, and outbreak management and involves support for calls for personnel from GOARN. She suggested that ICAN was willing to work with Médecins Sans Frontières, and other organizations, to support trainings of field personnel and/or supply needed personnel. MSF highlighted the need for IPC professionals within their organization. The advocacy activities of ICAN seek to integrate IPC into health care, ensure career paths for nurses and promote national IPC programmes.

- Jhpiego. Jhpiego ensures that the principles of IPC are strongly embedded within their various global initiatives including family planning, reproductive, maternal and newborn health. Jhpiego works with ministries to strengthen countries’ human capacities capacities to prevent HAIs and tracking quality improvements. Chandrakant Ruparelia described the ways in which his organization supports IPC, which are developing and updating IPC policies, guidelines and performance standards to improve the quality of
IPC at the workplace; developing an IPC reference manual and learning materials for use in training for frontline health workers; developing a system for in-service training; training faculty members to design, develop, implement and evaluate training; training advanced trainers to train IPC trainers and coaching newly trained trainers during initial courses. Jhpiego also advocates for national IPC programs in the countries in which it works and for appropriate logistics and supplies for IPC. It supports countries to respond to outbreaks of infectious disease, including an innovative redesign of personal protective equipment.

- the School of Nursing, University of São Paulo, Brazil. The presentation by Maria Clara Padoveze led to a discussion on the empowerment of nurses in IPC, and Julie Storr emphasized the importance of training in leadership, as demonstrated in a literature review.

- the World Surgical Infection Society. Joe Solomkin said that the Society is an inter-professional collaboration to improve patient safety where the need is greatest by bringing together regional surgical infection interest groups, creating education initiatives and producing actionable data. Its aim is to bridge the gaps between safe surgery programmes and IPC, using reduction of surgical infection as a gateway for IPC training platform and conducting research. He said that prevention of surgical infection should be seen as either IPC or safe surgery, depending on the audience.

- the University Hospital in Geneva (HUG). Daniela Pires described the work being done by HUG to promote hand hygiene. This includes a train the trainers (TOT) program delivered in many countries around the world and also delivery of an international course on the implementation of IPC. Countries supported directly include the Islamic Republic of Iran, Mexico, Uganda and other countries in Africa. In interesting challenge in Uganda has been addressing the cost burden of a tax placed on the alcohol present in hand hygiene products.

- the European Committee on Infection Control (EUCIC). Nico T. Mutters said that one of the Committee’s aims is to raise awareness about IPC. Therefore, together with UEMS Medical Microbiology and UEMS Infectious Diseases, EUCIC initiated the creation of a UEMS multidisciplinary joint committee for infection control (MJC-IC) within UEMS. Since Infection control is not a recognized specialty in all countries in Europe and within UEMS, this MIC is very important to raise political awareness and to help defining European standards of medical education and training in IPC.

- the Robert Koch Institute. Sara Tomczyk said that the Institute provided coordination, technical support and mentorship in two international facility-based networks, an African network for diagnostics, epidemiology and management of common infections and a network for hospital therapeutics.

5. DISCUSSION OF COUNTRY SUPPORT NEEDS AND OPPORTUNITIES

Claire Kilpatrick, facilitated this session and asked participants to break up into three groups to discuss their experience based on their organization’s activities in providing countries with technical support and expertise. She asked to use the WHO core components of effective IPC programmes at the facility level as a framework and to identify gaps and

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opportunities existing in countries. This discussion and feedback has been summarized in Table 2 below.

Table 2: Gaps and opportunities as it relates to country support activities

<table>
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<tr>
<th>Core component</th>
<th>Gaps</th>
<th>Opportunities</th>
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<tr>
<td>CC1: IPC programmes</td>
<td>• General lack of human resources, leadership and expertise</td>
<td>• Involving professional associations in advocacy for IPC, with consistent messages, and harmonization of the messages issued by world leaders</td>
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<td>• Leveraging the momentum of outbreaks - used to make IPC more visible.</td>
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<td>• WHO should continue to advocate the importance of IPC programmes, in collaboration with the GIPCN</td>
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<td>CC2: IPC guidelines</td>
<td>• General lack of international guidance on IPC approach</td>
<td>• WHO recent guidelines available</td>
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<td>• Opportunity for GIPCN members to actively contribute to WHO guidelines, including joint guidelines development as appropriate</td>
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<td>• Work is under way on an IPC guideline with the US CDC</td>
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<td>CC3: IPC training</td>
<td>• General lack of expertise in frontline and nominated IPC focal points in low- and middle-income countries</td>
<td>• Four recently published WHO advanced IPC training modules and an additional six to follow</td>
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<td></td>
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<td>• eLearning versions of WHO modules currently being developed for broader access</td>
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<td></td>
<td></td>
<td>• GIPCN inventory of available training courses and materials to be published on WHO website</td>
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<td>CC4: HAI surveillance</td>
<td>• Surveillance is limited by lack of capacity in</td>
<td>• WHO is planning to facilitate discussion and</td>
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<td></td>
<td>hospitals, limited laboratory support, difficulties in specimen collection and clinical data retrieval&lt;br&gt;• Limitations in the available HAI case definitions; lack of harmonized definitions and methods for surveillance</td>
<td>consensus around international HAI definitions, including adaptations for low-resource settings</td>
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<td><strong>CC5: Multimodal strategies</strong></td>
<td>• Multimodal strategies are complex and often not well understood&lt;br&gt;• Messaging is relatively new despite many likely implementing such approaches already</td>
<td>• WHO could extract explanations and examples on multimodal strategies from existing documents and implementation resources, improve them and consolidate them in one dedicated resource</td>
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<td><strong>CC6: Audit &amp; feedback</strong></td>
<td>• Monitoring and evaluation of such strategies are difficult, as it involves various processes and practices and there is no specific feedback that could be used as a “process indicator”.&lt;br&gt;• These strategies can sometimes lead to staff fatigue</td>
<td>• The existing process indicators could be assembled and global consensus sought on core indicators (i.e. hand hygiene compliance)</td>
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6. STRATEGIC APPROACHES FOR CROSS-GIPCN COOPERATION IN COUNTRY SUPPORT

Building upon the working group discussions on country support, Ana Paula Coutinho Rehse made a presentation on enhanced coordination, collaboration and support within GIPCN to combat the global burden of AMR by way of IPC. The priorities for IPC global level should be based on country priorities, with decisive, visible political commitment, including IPC policy development and enforcement, and both human resources and infrastructure. IPC programmes at national and health facility levels should ensure advocacy, training and the provision of data for future improvement and sustainability. Countries with established IPC programmes should ensure greater accountability, with IPC as a quality indicator. They should develop advanced information technology tools to support IPC monitoring and implementation and translation of information to sustain awareness and engagement. Credible incentives in the local context should be provided to increase compliance. Education and training are needed in all disciplines to embed knowledge about IPC.
Ana Paula Coutinho Rehse highlighted the importance of a consistent approach to country work and proposed to follow the one featured in the WHO core components implementation manuals. A strong emphasis was put on the use of the Infection Prevention and Control Assessment Framework (IPCAF) and the instructions for the national infection prevention and control assessment tool (IPCAT) to streamline the messaging and approach when working with countries to streamline implementation. She further reviewed the stepwise improvement approach as outlined in the implementation manuals developed by the IPC-GU comprises the following steps: (1) preparing for action using existing examples; (2) conducting a baseline assessment with the IPC assessment tool (IPCAT – national level) and framework (IPCAF – facility level); (3) developing and executing a plan with existing templates; (4) evaluating the impact in a plan previously agreed with country; and (5) sustaining the programme over the long term by ensuring commitment beforehand.

The presentation was followed by a discussion on the best way for GIPCN members to communicate among themselves. Benedetta Allegranzi explained that for the moment WHO may not in a position to manage an interactive website platform; she also reminded participants that there were previous discussions about the idea that a GIPCN member could take the lead in facilitating communications and discussions within the Network. Participants agreed that more information exchange within the Network is a priority. Resistance was expressed to use of an open platform, as the people present at the meeting are only representatives of their organizations and may not be free to share important information. It was suggested that a WhatsApp account be set up. Katrina Crist, speaking for APIC, said that she would ask her organization whether GIPCN could use the APIC platform, as a temporary solution. Although APIC could not commit itself to managing the site, a volunteer could be found to organize the messages received.

Benedetta Allegranzi said that the moderation of the platform was important, including to receive updated information from members and to ensure that all member organizations participate. The current website is simple, with documents and messages. An offer of a more sophisticated platform should include the capacity to maintain it. She reminded participants that the WHO regional offices have websites too.

She concluded noting that based on the feedback received the inventories of available training courses and country support will be simplified and circulated to all members; these will be valuable resources to permit them to identify others working in the same field and to contact them for possible collaboration; it could also help eliminate duplication of efforts.

7. CLOSING REMARKS

Edward Kelley, Director, Department of Service Delivery and Safety, said that IPC is relevant to the work of all WHO clusters but had been side-lined by the Organizational structure. Quality of care is essential for achieving universal health coverage. He thanked all GIPCN members for their contributions in that regard.

Benedetta Allegranzi thanked everyone for their attendance, engagement and contribution towards a successful two-day meeting. She noted the next steps that had emerged from the meeting (see Boxes 3 & 4) but also sharing between the Network and beyond is critical for achieving impact from a Network with such rich technical expertise.

Maria Clara Padoveze, School of Nursing, University of São Paulo, Brazil, stressed the important role of nurses in IPC. Benedetta Allegranzi informed the group that the Director-General of WHO has appointed a Chief Nursing Officer to his senior team. Member
organizations that are interested in contacting her and participating in the task force that she is setting up should contact Paul Rogers. Kathy Dunn, Public Health Agency of Canada, suggested that GIPCN forge a link with the Chief Nursing Officer and perhaps request representation on the task force.

Benedetta Allegranzi reminded participants of upcoming promotional and technical materials for the World Antibiotic Awareness week and 5th May WHO SAVE LIVES: Clean Your Hands campaign. She mentioned that WHO will be in touch shortly with further communications with upcoming activities and request for assistance.

**SUMMARY OF NEXT STEPS**

**Box 3: GIPCN training recommendations**

- The inventory spreadsheet will be simplified and transformed into a Google doc, so that members can add and change their entries.
- A new GIPCN web page sub-section will be created to list all training courses led by GIPCN member organizations, with links and a disclaimer from WHO regarding their content and quality.
- WHO and its regional offices will be more proactive in identifying opportunities for training needs and possible collaborations with GIPCN member organizations, including asking for trainers’ support.
- GIPCN member organizations will ensure that their training materials are in line with WHO standards and principles, as much as possible. In particular, the WHO IPC training package is being progressively made available and GIPCN members are encouraged to use these resources in countries, with adaptation as necessary.
- WHO could be involved in training sessions or workshops at conferences and other joint activities of members.
- Monitoring the impact of training and of publications should be improved by both WHO and GIPCN members to ensure that the targets are met.

**Box 4: GIPCN country support recommendations**

- The inventory spreadsheet will be simplified and transformed into a Google doc, so that members can add and change their entries.
- The inventory should be used to identify synergies among members and countries.
- Countries should be encouraged to use the multimodal strategy and the WHO-recommended approach for implementation. WHO will make more efforts to improve explanations about the multimodal strategy concept.
- To support country uptake and implementation of WHO documents and standards, GIPCN members could facilitate translations by either checking translations of material for technical accuracy or have translations done by technical entities in their countries.
- WHO and its regional offices will be more proactive in making calls through the Network when acute needs for country support emerge, in particular during outbreaks.
# ANNEX 1: GIPCN MEETING AGENDA

## Day 1 - 29th August 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30-09.00</td>
<td>Meeting registration – UNAIDS Building - Salle Kofi A. Annan, ground floor</td>
<td></td>
</tr>
<tr>
<td>09.00-09.15</td>
<td>Welcome Introductions and appointment of chairs/facilitators</td>
<td>Marc Sprenger, Benedetta Allegranzi</td>
</tr>
<tr>
<td>09.15-09.20</td>
<td>Confidentiality and meeting objectives</td>
<td>Paul Rogers</td>
</tr>
<tr>
<td>09.20-09.30</td>
<td>Agenda overview</td>
<td>Benedetta Allegranzi</td>
</tr>
<tr>
<td>09.30-10.10</td>
<td>Update on WHO Infection Prevention and Control (IPC) Global Unit activities and plans</td>
<td>Benedetta Allegranzi</td>
</tr>
<tr>
<td>10.10-10.30</td>
<td>Update on AMR surveillance</td>
<td>Sergey Eremin</td>
</tr>
<tr>
<td>10.30-10.50</td>
<td>Patient safety and quality network updates</td>
<td>Neelam Dhingra, Julie Storr</td>
</tr>
<tr>
<td>10.50-11.10</td>
<td>Update on IPC in health emergencies</td>
<td>Devika Dixit</td>
</tr>
<tr>
<td>11.10-11.30</td>
<td>Tea/Coffee</td>
<td></td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Overview of GIPCN inventory (training and country support)</td>
<td>Anthony Twyman</td>
</tr>
<tr>
<td>11.50-13.00</td>
<td>Focus on training activities by GIPCN members*</td>
<td>All</td>
</tr>
<tr>
<td>13.00-13.45</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>13.45-14.15</td>
<td>Focus on training activities by GIPCN members*</td>
<td>All</td>
</tr>
<tr>
<td>14.15-16.00</td>
<td>Discussion on training needs and opportunities (group work)</td>
<td>Julie Storr (facilitator)</td>
</tr>
<tr>
<td>16.00-16.15</td>
<td>Tea/Coffee</td>
<td></td>
</tr>
<tr>
<td>16.15-17.15</td>
<td>Discussion on strategic approaches for across GIPCN cooperation on training</td>
<td>Benedetta Allegranzi, Anthony Twyman (facilitators)</td>
</tr>
<tr>
<td>17.15-17.30</td>
<td>Focus on any other key GIPCN member activity not related to training or country support</td>
<td>TBD</td>
</tr>
<tr>
<td>17:45-18:45</td>
<td>Cocktail – WHO main restaurant</td>
<td>All</td>
</tr>
</tbody>
</table>

## Day 2 - 30th August 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30-08.45</td>
<td>Welcome and recap on day 1</td>
<td>Chair</td>
</tr>
<tr>
<td>08:45-09.30</td>
<td>Summary of IPC-GU approach to country support and the new environment of GPW 13</td>
<td>Paul Rogers</td>
</tr>
<tr>
<td>09:30-10.45</td>
<td>Summary of country support provided by WHO regional offices</td>
<td>WHO IPC RFPs**</td>
</tr>
<tr>
<td>10.45-11.00</td>
<td>Tea/Coffee</td>
<td></td>
</tr>
<tr>
<td>11.00-12.30</td>
<td>Focus on country support provided by GIPCN members</td>
<td>GIPCN members***</td>
</tr>
<tr>
<td>12.30-13.15</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>13.15-15.00</td>
<td>Discussion on country support needs and opportunities</td>
<td>Claire Kilpatrick (facilitator)</td>
</tr>
<tr>
<td>15.00-15.15</td>
<td>Tea/Coffee</td>
<td></td>
</tr>
<tr>
<td>15.15-16.15</td>
<td>Discussion on strategic approaches for across GIPCN cooperation on country support</td>
<td>Ana Paula Coutinho (facilitator)</td>
</tr>
<tr>
<td>16.15-17.15</td>
<td>Discussion on plans and priorities for GIPCN collaborations in 2018-2019</td>
<td>Benedetta Allegranzi (facilitator)</td>
</tr>
<tr>
<td>17:15-17:30</td>
<td>Closing remarks</td>
<td>Ed Kelley</td>
</tr>
</tbody>
</table>

*Each organization that has training activities will present max 5 slides for 5 min; **10 min each (max 10 slides); ***Each organization that has country support activities will present max 8 slides for 8 min.
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ANNEX 3: TRAINING AND COUNTRY SUPPORT INVENTORY LIST OF PARTICIPANTS

BACKGROUND
The GIPC Network presents a unique opportunity to help support the IPC-GU activities, specifically in the realm of training and country support work; to enhance local, national and international coordination and collaboration in the field of IPC and support WHO’s and Member States’ efforts on IPC implementation.

In effort to understand the capacity of the GIPC Network, the IPC-GU undertook a rapid inventory assessment of both international training opportunities and country support activities that are currently offered or supported by participating members. The purpose of this repository is to:
- help identify GIPCN capacities, opportunities and gaps
- give access to high quality training courses
- Insight to approaches for IPC trainings
- identify niche trainings

SUMMARY OF KEY FINDINGS

1. GIPCN Training
A total of 39 courses were submitted, with a majority offering more advanced IPC training (54%) compared to basic level modules (46%) (Figure 1). The majority of basic modules were for all health care workers versus the advanced modules being more specific to IPC focal points (Figure 2).

Figure 1. Division of GIPCN courses according to basic versus advanced IPC training
Just over half of basic IPC courses (52%) are available online as compared to 40% of advanced modules. Moreover, the predominant language offered is English, though some modules are offered in multiple languages (region dependent). Over 70% of basic modules and 50% of advanced modules are fee-based and range from 1 week to 6 months or less in duration and largely offering certificates of participation or continuing educational credits where accepted (Figure 3).

*Cert. Particip: certificate of participation; EURO: WHO Regional office for Europe; PAHO: Pan American Health Organization; SEARO: South-East Asia Regional Office
Course materials range in specific IPC topic areas with heavy emphasis on standard precautions (62%) for basic modules and multimodal strategies (39%), HAI surveillance (22%) and transmission-based precautions (22%) for more advanced modules.

There remains a vast amount of resources available globally given GIPCN and the breadth of expertise within this Network. However, there was discussion that there is a need to broaden language availability, consider financial cost barriers to low- and middle-income countries seeking advanced educational opportunities, and consideration for international standards as it relates to international certification in the field of IPC.

2. GIPCN Country support activities

GIPCN members have a split in their focus for country specific activities with 63% operating internationally as compared to 37% operating strictly nationally (Figure 4) and a predominant focus in the African region (29%) (Figure 5).

Figure 4. Scope of country support activities by GIPCN members

* APIC: Association for professionals in infection control and epidemiology; BARN: Baltic Antibiotic Resistance collaborative Network; CDC: US Centre for Disease Control and Prevention; EUCIC: European Committee for Infection Control; EUNETIPS: European network to promote infection prevention for patient safety; ICAN: Infection Control Africa Network; MoH: Ministry of Health; PHAC: Public Health Agency of Canada; RKI: Robert Koch Institute; USP: University of Sao Paulo; WCC-HUG: WHO collaborating centre – Hôpitaux universitaires de Genève;
The work profile for internationally focused activities were largely implementation of national and facility IPC programmes (69%), IPC education and training (66%) and specific IPC interventions (i.e. surgical site infection prevention) (Figure 6).

**Figure 5. Countries where GIPCN members provide IPC support**

**Example countries of focus:**

- **AFR**: Senegal, Liberia, Namibia, Uganda, Tanzania
- **SEAR**: Vietnam, Cambodia, India, Thailand
- **PA**: Haiti, Caribbean islands, Mexico
- **EUR**: Ukraine, Turkey, Bulgaria
- **EMR**: Afghanistan, Pakistan
- **WPR**: Philippines

*AFR: African region; EMR: Eastern Mediterranean region; EUR: Europe region; PA: Pan American; SEAR: South-east Asia region; WPR: Western Pacific region

**Figure 6. Focus of international country support activities**

- IPC programmes: 69%
- Training: 66%
- Spec. IPC: 59%
- Lab support: 48%
- Monitoring: 45%
- AMR: 41%
- Other: 34%
- Organism sup.: 21%
- Bevah. Imp. Support: 14%