

## Developing Competencies for Infection Prevention Professionals

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IFIC and IPAC Conjoint Conference 2019, Quebec

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## Declaration

- Neil Wigglesworth
- IFIC/IPAC 2019 Quebec
- I have no financial or other interests to disclose related to this presentation



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## Objectives

- What are competencies?
- Do we need competencies in IPC?
- Describe a range of IPC competencies from different countries and regions
- Describe development of competencies in UK and Ireland (IPS)
- Acknowledgement
  - Helen O'Connor, former IPS education group lead

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## Competency

- “a person who has acquired a set of skills with the ability to apply and measure these skills against set standards”
  - Denton et al. (2019) *J Inf. Prev.*; 20 (1)
- “the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development”
  - ECDC (2013) <https://ecdc.europa.eu/en/publications-data/core-competencies-infection-control-and-hospital-hygiene-professionals-european>

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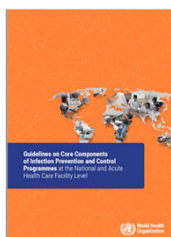
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## The need for IPC Competencies

- Core component 1: “...it is important that all infection preventionists are subject to review and regular updates of infection control competencies”
- Core component 3: “IPC specialists [...] trained to achieve an expert level of knowledge [...] undergo regular updates of their competencies”




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## Competencies: ECDC



- 4 'areas'; 16 domains

Area	Domain
Area 1. Programme management	Elaborating and advocating an infection control programme
	Management of an infection control programme, work plan and projects
Area 2. Quality improvement	Contributing to quality management
	Contributing to risk management
	Performing audits of professional practices and evaluating performance
	Infection control training of employees
Area 3. Surveillance and investigation of healthcare-associated infections (HAIs)	Contributing to research
	Designing a surveillance system
	Managing (implementation, follow up, evaluation) a surveillance system
Area 4. Infection control activities	Identifying, investigating and managing outbreaks
	Elaborating infection control interventions
	Implementing infection control healthcare procedures
	Contributing to reducing antimicrobial resistance
	Advising appropriate laboratory testing and use of laboratory data
	Decontamination and sterilisation of medical devices
Controlling environmental sources of infections	

<https://ecdc.europa.eu/en/publications-data/core-competencies-infection-control-and-hospital-hygiene-professionals-european>

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## Competencies: IPAC Canada PCI

- Published 2016
- Self appraisal tool to be published soon
- Assess self on continuum from novice to expert
- Three categories; Foundational, Applied, Supporting
- 14 competency areas

	Foundational	Applied	Supporting
IPAC-specific	Yes	Yes	No
Application	In daily practice	As specific issues arise	In daily practice
Core competency categories	Education	Health Care Facility Design, Construction, Renovation and Maintenance	Communication
	Microbiology	Occupational Health and Safety	Leadership
	Routine Practices and Additional Precautions	Outbreaks and Infectious Disease Threats	Management
	Surveillance and Epidemiology	Quality Improvement and Patient Safety	Professionalism
	Research Utilization	Reprocessing of Medical Devices	




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### Surveillance and Epidemiology

The ICP has knowledge of:

1. The epidemiological significance of person, place, and time; and
2. The basic principles, purposes, types and methods of surveillance.

The ICP is able to:

1. Determine organizational priorities for surveillance, based on available evidence and taking into account available resources and regulatory or other requirements;
2. Develop clearly defined objectives and goals for a particular surveillance program that are relevant for the target area/procedure/population(s) of interest;
3. Choose appropriate definitions (e.g., standardized) for cases/indicators to be used and be consistent in their application for interpretation of data;
4. Select appropriate sources to obtain data that are necessary and relevant to the surveillance program and provide rationale for choices;
5. Select appropriate data collection methods that will ensure valid and reliable data are obtained and provide rationale for choices;
6. Use a systematic approach to obtain only necessary data;
7. Use a data management system that allows efficient and effective data storage, management, analysis and reporting;
8. Clearly describe data by calculating and reporting appropriate descriptive statistics (e.g., means, rates, odds ratios) and by developing graphs and tables;
9. Critically evaluate and interpret the meaning of results, in the context of trends over time, comparison to internal or external data sources and/or benchmarks, the purpose of the surveillance program and any other relevant context;

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### Competencies: APIC/CBIC

- APIC competency pathway incorporates CBIC certification (CIC)<sup>®</sup>
- Brand new revision just announced (white paper June 2019) – update on 2012 model
- 4 career stages; “Novice, Becoming Proficient, Proficient, Expert”
- 6 “future orientated competency domains”

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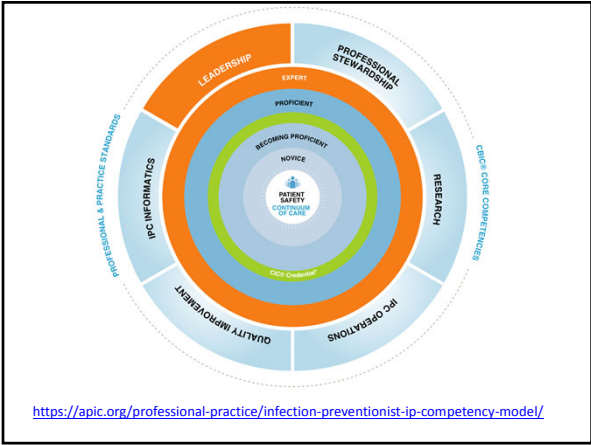
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**IPC Operations**

The APIC Competency Model has six future-oriented competency domains (each with subdomains). These are typical areas of knowledge, skills, abilities, and personal attributes that have been identified as relevant in the next 3-5 years for growth of the IP and IPC profession.

IPC Operations: While all model domains address IPC content, this domain highlights specific future-oriented competency content that crosses clinical, technical, and leadership subdomains. The broad scope of functions contained in the IPC operations domain use proactive and reactive approaches to conduct surveillance, identify infection risks, implement infection interventions, and mitigate risks.

- EPIDEMIOLOGY AND SURVEILLANCE
- EDUCATION
- IPC ROUNDING
- CLEANING, DISINFECTION, STERILIZATION
- OUTBREAK DETECTION AND MANAGEMENT
- EMERGING TECHNOLOGIES
- ANTIMICROBIAL STEWARDSHIP
- DIAGNOSTIC STEWARDSHIP

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**EPIDEMIOLGY AND SURVEILLANCE**

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Epidemiology is the study of the frequency, distribution, cause, and control of disease in populations, while surveillance is a comprehensive method of measuring outcomes and related processes of care, analyzing the data, and providing information to members of the health care team to assist in improving those outcomes. Together, they form the basis of infection prevention analysis and workflow.

IPs bring a solid understanding of epidemiology to surveillance in order to be proactive and predictive in setting infection reduction targets and establish thresholds for action and response. To do this successfully, IPs must be able to apply and expand surveillance principles; use complex data display tools (control charts, affinity diagrams, scatter plots); conduct basic cluster/epidemic investigations; interpret results using statistics, rates, and ratios; and know what benchmarks to use for his/her program. The IP's surveillance skills can be augmented by familiarity with analytical computer programs or through productive collaboration with colleagues with this talent. This is a core area of IPC knowledge and skills, where IPs need to constantly refresh and deepen their knowledge, so that they are able to speak with authority and clarity to public health officials and diverse professionals in their facility and other facilities that may be impacted when dealing with novel or ambiguous outbreak situations or high-stakes emergencies.

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## Competencies: Hong Kong



**Feature Article**

### Identifying Core Competencies of Infection Control Nurse Specialists in Hong Kong

Wai Hong Chan, PhD, MPH, BSI(PostReg), SBA(Hons) ■ Trevor G. Bond, PhD ■ Bob Adamson, PhD ■ Merrick Chow, PhD, RN

- Earlier work identified 83 core competencies by Delphi process
- Cross sectional survey of HK IPNs with 'Rasch Model analysis' identified 76 with strong agreement
- Grouped into 15 "competency categories" for international comparison

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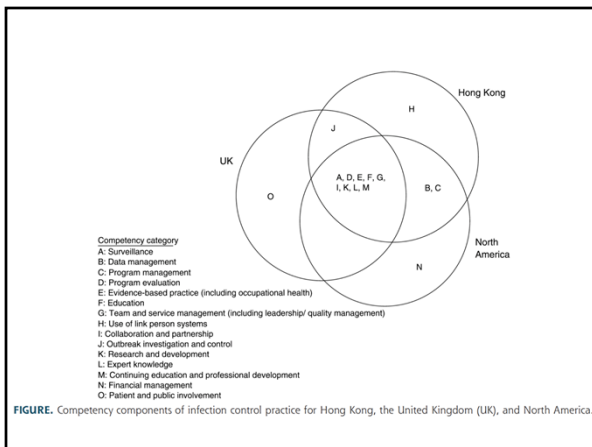
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**ips** Infection Prevention Society

## Competencies: UK and Ireland

- Long history of competency development.
- ICNA 2000
- 5 Domains
  - Specialist knowledge
  - Evidence based practice
  - Teaching and learning
  - Management and leadership
  - Clinical research
- Self assessment tool (2001) based on 'Benner'



Tew L, King D, Moore L & Meyers D. *British Journal Infection Control* (2002), Vol3:4

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**ips** Infection Prevention Society

## IPS competences (2011)



**Four domains which described the major components of advanced-level practice**

- clinical practice
- education
- research
- leadership and management

**Competence statements**

**Performance indicators**

**Knowledge, understanding and skills**

VOL. 12 NO. 2 MARCH 2011 Journal of Infection Prevention

Slide credit Helen O'Connor

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**ips** Infection Prevention Society 

## How to make the most of the IPS Outcome Competences for Practitioners in Infection Prevention and Control

*Maria Bennalliek<sup>1</sup>, Margaret Tannahill<sup>2</sup>, Carol Pellowe<sup>3</sup>, Jean Lawrence<sup>4</sup>, Helen O'Connor<sup>5</sup>, Andrea Denton<sup>6</sup>, Tracy Quazi<sup>7</sup>*

Level of achievement	Competence required
<b>O</b>	Awareness through <b>observation</b> of the performance indicator, but not active participation. Performing with <b>assistance</b> . At this stage you are learning the activity but still need the help of someone more experienced to complete it effectively to the level required.
<b>S</b>	Performing under <b>supervision</b> . At this stage you can fulfil the performance indicator, but only with the oversight of a more senior colleague to check for safety and efficiency.
<b>C</b>	Performing independently. You are <b>competent</b> in relation to the performance indicator.

Journal of Infection Prevention May 2013 VOL. 14 NO. 3

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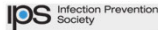

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## Publication of the IPS audit and surveillance competences

Jane McNeish<sup>1\*</sup>, Catharine Pym<sup>2</sup>, Sandra Beaumont<sup>3</sup>, Jackie Milby<sup>4</sup>

1. Health Protection Scotland, 4<sup>th</sup> Floor, Meridian Court, 5, Cadogan Street, Glasgow G2 6QE, UK. Email: jane.meneish@nhs.net  
 2. Royal Devon and Exeter NHS Foundation Trust, Infection Prevention and Control Department, Exeter UK  
 3. Castlefield NHS Trust, Public Health - Infection Control Team, Halifax, UK  
 4. Oxford Brookes University, Faculty of Health and Life Sciences, Oxford, UK

- Three competency statements and a range of performance indicators
- Not superseded to date
- May reflect differences in UK IPC approach compared with (e.g.) North America

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
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Original Article

## Revised Infection Prevention Society (IPS) Competences 2018

Journal of Infection Prevention  
 2018, Vol. 20(1) 18-24  
 © The Author(s) 2018  
 Article reuse guidelines:  
[sagepub.com/journalsPermissions](http://sagepub.com/journalsPermissions)  
 DOI: 10.1177/175177418798908  
[jip.sagepub.com](http://jip.sagepub.com)  


Andrea Denton<sup>1</sup>, Carole Fry<sup>2</sup>, Helen O'Connor<sup>3</sup> and Jude Robinson<sup>4</sup>

- Reviewed in 2016 to increase use and accessibility
- Designed for online access and use
- Domains changed to include quality improvement
- New 'levels' of competence identified

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## Level Definition

**Assisted**

- Practitioner who may be new to infection prevention and control, or inexperienced and requires assistance or guidance to undertake a specific task or role.

**Supervised**

- Practitioner who may require observation and direction to carry out a specific task/role they are unfamiliar or inexperienced with. This may require oversight from a more senior colleague.

**Independent**

- Practitioner who has the knowledge and skills to work autonomously without any supervision or assistance.

Slide credit Helen O'Connor

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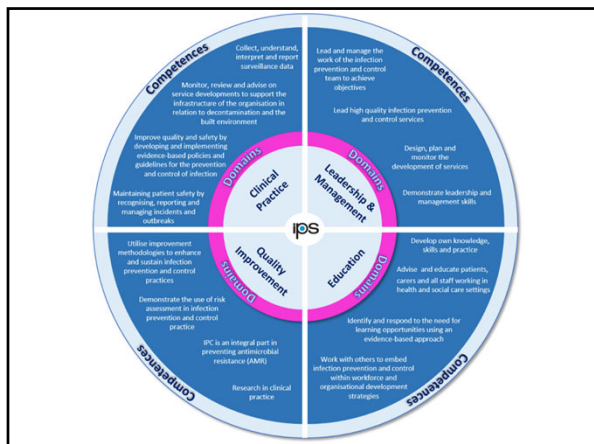
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<https://www.ips.uk.net/professional-practice/competences/>

The screenshot shows the Infection Prevention Society (IPS) website. At the top, there is a navigation menu with links for Home, Education & Events, Professional Practice, News & Media, Membership, About IPS, Public/Patients, and Contact Us. A search bar is located in the top right corner. The main banner features the text "Infection Prevention 2019" and "13th ANNUAL CONFERENCE: 22-24 September, ACC Liverpool, United Kingdom". Below the banner, there are four circular icons representing different services: "Competency and Quality Programmes for more information", "IPS Twitter feed", "Networking for", and "FREE Access to the". The section is titled "Special Access Membership (SAM)" and contains the following text: "IPS offers a free Special Access Membership (SAM) for overseas members living and working in countries with limited resources (see SAM online application form for qualifying countries). All applications are vetted, and require supporting documents (digital copy/photo of your driving license or passport, digital copy/photo of proof of address in a resource limited country, and an official letter from your employer (must be in English to allow for verification)). Please click here to view the SAM Terms of Reference". At the bottom of the section, there is a blue button that says "Special Access Membership (SAM) - Register Online ...".

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## Conclusions

- Competencies are a vital part of an IPC practitioner's development from novice to expert and leader
- Competencies have been developed by a number of national and international bodies
- Competency frameworks have many similarities while reflecting local context
- Any questions?
- @Neilwigg @IPS\_Infection @theific 

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