出國報告(出國類別：會議)

出席「APEC-GHSA 政策論壇：強化監測與實驗室量能，對抗醫療照護相關感染及抗生素抗藥性」

APEC-GHSA Policy Forum: Strengthening Surveillance & Laboratory Capacity to Fight Healthcare Associated Infections and Antimicrobial Resistance

服務機關：衛生福利部疾病管制署

姓名職稱：曾淑慧組長、簡麗蓉科長

派赴國家：越南河內市

出國期間：105 年 12 月 13 日至 12 月 16 日

報告日期：106 年 1 月 5 日

摘要

衛生福利部疾病管制署(以下簡稱本署)感染管制及生物安全組曾淑慧組長與簡麗蓉科長受邀於 105 年 12 月 13 日至 16 日赴越南河內市參加「APEC-GHSA 政策論壇：強化監測與實驗室量能，對抗醫療照護相關感染及抗生素抗藥性 (APEC-GHSA Policy Forum: Strengthening Surveillance & Laboratory Capacity to Fight Healthcare Associated Infections and Antimicrobial Resistance)」。議程設定 5 大議題，分別為：醫療相關感染與抗藥性監測系統、提供病人新治療方法、抗生素管理的最佳策略與工具、在感染預防與控制領域建立持續、目標導向及可擴展的夥伴關係、應用醫療照護相關感染監測數據推動感染管制與抗生素管理；我國代表並受邀在提供病人新治療方法與建立夥伴關係 2 項議題進行報告分享。

參加本次會議除了透過論壇安排的議程得知 APEC 會員體目前在相關主題的執行現況，並藉此機會和與會的會員體、NGO 團體及私人機構等非政府組織代表針對醫療照護相關感染與抗藥性監測通報機制進行交流，建立國際連繫管道，使國內相關政策之研擬與推動能持續與國際接軌，結合國內外資源與力量，共同對抗醫療照護相關感染與抗藥性的威脅。

目次

一、目的

本次論壇係延續前次「APEC-GHSA 感染管制與預防架構政策論壇(APEC－GHSA policy forum on Infection Prevention and Control (IPC) Infrastructure)」成果，期透過以下方式，推動亞太經合組織下對抗亞太地區醫療照護相關感染(healthcare associated infections, HAI)和抗生素抗藥性(antimicrobial resistance, AMR) 的工作落實執行：

(一) 分享可以有效驅動感染管制(infection prevention and control, IPC)與抗生素管理良好行為的相關政策與措施，以促進病人預後及醫療系統效能。

(二) 增加關於有效的醫療照護相關感染監測模式及資料收集系統的認知，包括新近發展的經濟體層級感染率監測與報告方案，例如病人經驗報告策略 (Patient-Reported Experience Measures, PREM)與病人結果報告策略(Patient-Reported Outcome Measures, PROM)等。

(三) 促進合作機會，以加強亞太經合組織經濟體量能，改進各層級醫療衛生感染管制相關介入措施。

(四) 探討可執行的政策和實務，以推動感染管制、開發新的抗微生物製劑並確保其獲取途徑的創新機制；及透過快速診斷與抗生素管理計畫以保護抗微生物製劑。

參加本次會議可得知 APEC 會員體目前在論壇相關主題的執行現況，並和與會的會員體、NGO 團體及私人機構等非政府組織代表針對醫療照護相關感染與抗藥性監測通報機制進行交流，建立國際連繫管道，合作提升 APEC 區域的監測效能與實驗室量能，對抗醫療照護相關感染與抗藥性的威脅。

二、過程

(一) 出國行程

本次出國日期自 2016 年 12 月 13 日起至 12 月 16 日止，含路程時間共計 4 天。行程表如下：

日期	行程說明
10/13(二)	啟程往越南河內 簡麗蓉科長出席 Speaker Meeting
10/14(三)	會議
10/15(四)	上午：會議 下午：參訪
10/16(五)	返程

會議議程詳如附錄 1。

(二) 會議內容

本次會議共有 10 個經濟體超過 70 名以上人員參加，由越南副衛生部長 Le Quang Cuong 致詞揭幕，美國 CDC 駐越南的主任 Dr. Anthony Mounts 發表 plenary speech 後，展開為期 1 天半的會議，並在第 2 天的下午安排參訪 Bach Mai Hospital。

與會人員合影

每日會議重點摘錄如下：

1. 12 月 14 日

(1) Surveillance systems for Healthcare Associated Infections and Antimicrobial Resistance：由美國 CDC 的 Dr. Neil Gupta 介紹美國近幾年來透過各州立法及健康保險申報給付規範等方式，成功應用 NHSN 系統(National Healthcare Safety Network)監測與收集國內中心導管相關血流感染(central line-associated bloodstream infection, CLABSI)、導尿管相關泌尿道感染(catheter-associated urinary tract infection, CAUTI)和困難梭狀桿菌(*Clostridium difficile* infection, CDI)等醫療照護相關感染發生情形及臨床重要細菌的抗藥情形，並在近期開始協助越南推動建立 AMR 和 HAI 的監測系統。越南衛生部醫政處處長 Dr. Luong Ngoc Khue 則介紹該國響應世界衛生組織(World Health Organization, WHO)所提出的 No action today, no cure tomorrow 議題，分別於 2013 年提出 2013-2020 對抗 AMR 的國家行動計畫，以及於 2016 年提出 2016-2020 對抗 HAI 的國家行動計畫；已逐步達成：建立 AMR 監測系統並將加入 WHO 的 GLASS 網絡、公布及施行抗生素使用指引、完備中央、區域及醫院層級的感染管制組織架構並公布相關指引與法規、強化醫用微生物實驗室品質、以及建立動物用抗生素監測與使用的相關規範等成果。

(2) Delivering new treatments to patients：由美沙東(MSD)藥廠 Dr. Silas Holand 介紹抗藥性已成為全球共同面臨的嚴重威脅，有賴多方組織共同合作對抗，企業也是其中的重要伙伴之一。但抗生素因為細菌抗藥性使藥物可治療的期間短、新藥申請審核流程複雜及開發新抗生素所產生的經濟效益遠不如其他治療藥物，導致藥廠在近年來投注於抗生素研發的活動已逐年下降，因此需要相關政策的支持，以加速新一代抗生素的開發與促進合理使用。我國食品

藥物管理署陳美方高級審查員則介紹我國新藥審查的執行現況，並以治療社區型肺炎的抗生素「太捷信 (nemonoxacin)」為例，說明審查機制中的諮詢系統(consultation system) 如何協助廠商加速申請作業流程，達成以透明且有效率的審查機制支持廠商進行新藥發展的目標。

(3) Best practices and tools for antimicrobial stewardship：由馬來西亞國際醫學大學的副校長 Dr. Victor Lim、 南韓三星醫院感染科主任 Dr. Doo-Ryeon Chung、何志明市感染管制學會理事長 Dr. Le Thi Anh Thu 及越南食品微生物及分子生物部門副主任 Dr. Huong Bui 各自分享該國目前推動抗生素管理所使用的策略以及初步成果。例如南韓政府設定2015-2020年的目標為抗生素使用量下降20%、上呼吸道感染個案開立抗生素比率下降 50%、呼吸道疾病開立抗生素比率下降 20%。為達成計畫目標，衛生部門除了公布包括兒童急性上呼吸道感染、社區感染肺炎、泌尿道感染、心血管感染、腸胃道感染等 9 項治療指引，並以政策規範醫院必須評估抗生素的合理使用情形等，督導醫院逐步改善；許多教學等級醫院(tertiary hospital)透過建立資訊化系統、增加聘請感染科醫師審查等方式，強化抗生素使用管理。南韓政府另結合全球抗生素認知週(world antibiotic awareness week)辦理宣導教育活動，提升全國民眾對抗生素正確使用的認知。越南以先驅研究的方式，在社區推動包括教育訓練(手部衛生與個人衛生、環境衛生、抗藥性細菌、適當使用抗生素等)、張貼海報與發送衛教宣導單張、家庭訪視進行監測評估等介入措施，結果明顯降低介入對象ESBL-*E.coli*帶菌者盛行率；該國同時已建立食品抗藥性細菌監測機制，並且規劃推行至全國，將每季針對批發市場、零售市場及超市的雞、豬、魚、蝦抽樣檢測 ESBL-*E.coli* 和抗生素殘留。

2. 12 月 15 日

(1) **Key principles for developing Sustainable, Results-oriented and Scalable Partnerships in IPC**：感染管制是需要許多個人與團體相互合作彼此協助才得以長久持續的工作，因此本階段由美商必帝公司 Mr. Chris Colwell、Jhpiego Corporation 的 Ms. Natalie Hendler、我國疾病管制署簡麗蓉科長及日本順天堂大學附設醫院感染管制主任 Dr. Satoshi Hori 分享不同領域建立發展夥伴關係的經驗。美商必帝公司依據合作單位的相關政策與需求，透過提供公司產品及專業服務等方式建立合作關係，近期推動項目包括和越南熱帶醫學醫院合作開設採血訓練課程、和印度的醫院評鑑機構合作發展醫院感染管制認證機制、和中國衛生部及醫院協會合作推動建立感染管制示範中心計畫等。Jhpiego Corporation 是約翰霍普金斯大學全球衛生的附屬非營利機構，43 年間共在超過 150 個國家，透過將國際指引轉化成為當地作為的方式，協助強化醫療工作人員與醫療系統成果，提供婦女和家庭有品質的醫療照護；近期推動的感染管制相關事項包括協助坦桑尼亞強化感染管制量能，以及因應伊波拉疫情協助臨床人員和企業合作研發容易脫除的個人防護裝備等。我國是在推動手部衛生和中心導管組合式照護的過程中，建構出中央、區域和地方(醫院內部)3 種不同層級的合作關係：中央是由本署和醫策會、臨床專業學協會與示範中心/責任醫院等專業團體建立的合作關係，共同發展全國行動計畫的推動與執行策略及相關工具；區域則是促進醫院間建立夥伴網絡，透過經驗的分享交流及責任醫院的輔導等，提升區域整體執行量能；地方是醫院內部需建立跨部門的工作團隊，由一層主管領導進行推動。日本則是由研究、教育、病人安全和醫療品質、以及財務誘因等 4 個面向，說明如何藉由不同方式在政府部門、專業團體、研究機

構、醫院等不同單位之間建立連結。

(2) Using Healthcare Associated Infection (HAI) data for action：監測的目的是提供數據做為政策規劃和執行成效評估的實證基礎，因此 Dr. Marilyn Cruickshank 在演講中分享，為避免感染管制人員將大部分時間耗費在資料收集上，建議監測應針對特定事件、流程、裝置、病原體或高危險群病人，不應該對全院所有事件進行監測；因此該國目前是以手部衛生遵從性和金黃色葡萄球菌血流感染為主要監測標的，並發展行動裝置軟體可以在照護點即時記錄監測結果，節省工作人員時間；此外應以簡單清楚的方式呈現各項監測數據回饋給醫院及一般大眾，才能使監測數據有效應用。Dr. Doo Ryeon Chung 分享南韓三星醫院醫療照護相關感染與重要抗藥性細菌監測數據及所採取的相關介入措施：三星醫院感染管制人力配置由 1994 年每 1,270 床 1 人逐步提升至 2013 年為每 200 床 1 人，在 2016 年 9 月之後更提升到每 125 床 1 人；自 2011 年針對冠狀動脈繞道手術(coronary artery bypass grafting, CABG)開始推行預防外科部位感染組合式照護，2013 年擴大推動範圍至大腸直腸手術(colon surgery)，其中 CABG 的感染率由 2011 年的 3.52%到 2016 年第 1 季下降至 1.06%；2012 年 12 月開始推動中心導管組合式照護，在 2014 年達成 90.9%及 50.6%的加護病房連續 3 個月及 6 個月沒有中心導管相關血流感染個案發生的成果。Dr. Celia Carlos 分享菲律賓在資源不足的情況下，以長達 26 年的時間逐步在全國各地推動建立實驗室監測量能的策略；參與擔任監測點的醫院會得到 1 年的相關物資供應，但實驗室需同意派員受訓 1 個月，並必須接受為期 6 個月的品質監控訪視，然後在 1 年後自行負責相關物資的採購。最後由 Dr. Go Tanaka 分享日本的醫療照護相關感染監測(Japan Nosocomial Infection Surveillance, JANIS)執行現況，JANIS 系

統於 2000 年建置，目前共分為 5 個通報模組(臨床實驗室、抗藥性細菌、外科部位感染、加護病房、新生兒加護病房)，主要接受規模 200 床以上醫院通報，在納入醫院健保申報感染管制費用的通報項目後，參與至少 1 項模組通報的醫院家數已達 1300 家以上；未來將逐步納入 200 床以下醫院，並尋求其他國家的醫院加入通報。

論壇會場

我國代表受邀在提供病人新治療方法與建立夥伴關係 2 項議題進行報告分享

(3) 參訪 Bach Mai Hospital：醫院設立於 1911 年，總床數 2,000 床，據院方表示該院為全國最大的醫院，亦為越南境內首屈一指的醫學中心。該院自 1998 年開始建立感染管制組織架構，目前依據世界衛生組織所提出的核心工作項目進行感染管制計畫的規劃與推動。囿於時間限制，參訪活動分為 3 組同時進行，本署與會同仁參加訪視加護病房及供應中心的小組，該院的加護病房如照片所示，為多病床的病室，床與床之間沒有圍簾等區隔設施，在床尾及工作車上設有酒精性乾洗手液，病室外走廊上設有水槽與水龍頭，提供洗手液但未見擦手紙；供應中心器材仰賴人工清洗，清洗包裝區和滅菌區有明顯區隔與動線管理。透過實地參訪了解，該院與越南境內許多醫院一樣，面臨病人超收過度擁擠與資源有限的問題，因此在感染管制工作上遭遇許多挑戰，有待克服。

Bach Mai Hospital 加護病房

Bach Mai Hospital 供應中心

(三) 各國經驗分享

會議期間，積極與各國代表就其國內之醫療照護相關感染與抗藥性監測機制與及所推動的控制策略等進行交流，茲將討論事項摘要如下：

1. 美國

為降低醫療照護相關感染及抗生素抗藥性，美國疾病控制與預防中心醫療品質促進部門(Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention)的 Dr. Neil Gupta 向曾組長表示，美國 CDC 自 2005 年建立 NHSN 系統，在 2011 年，以政策規範醫院需將指定的院內感染資料提報至 NHSN 系統才能獲得給付(pay for reporting)，以及 2013 年針對指定項目表現優良醫院與或落後醫院提供額外補助與罰款(pay for performance)。此監測系統除提供醫療院所通報院內感染資料以外，NHSN 於 2011 及 2014 年分別增加抗生素使用(AU)及抗生素抗藥性(AR)的通報模組，以響應 WHO 於 2014 年所推行之全球監測通報政策。

另，美國 CDC 亦同步響應全球行動計畫(Global Action Plan)，持續推行全球衛生安全綱領(Global Health Security Agenda, GHSA)，致力於加強國際間的合作及各項對抗抗藥性的因應措施量能。

2. 韓國

曾組長於 2015 年赴韓國參與 APEC-GHSA 期間曾拜會韓國三星集團首爾醫院院長 Dr. Song Jae-Hoon 及其感染科主任 Dr. Doo-Ryeon Chung，了解該院於 2015 年爆發中東呼吸道症候群(MERS-CoV)疫情過後，強化感染管制及其相關措施之情形；今年的 APEC-GHSA Policy Forum 與會期間，Dr. Doo-Ryeon Chung 更與曾組長分享，韓國三星首爾醫院除了推行預防中心導管相關血流感染、外科手術部位感染、呼吸器相關肺炎(ventilator-associated pneumonia, VAP)及導尿管相關泌尿道感染等組合式照護措施，並定期執行感染管制稽核之外，也提供獎勵及保障制度，鼓勵感染科醫師加入醫療院所的感染管制團隊，全職處理感染管制及抗生素管理相關業務。Dr. Doo-Ryeon Chung 亦為 WHO 及其西太平洋區域辦事處 (Western Pacific Region Office, WPRO) 韓國代表之一。

3. 日本

Dr. Satoshi Hori 為 WHO 日本代表顧問、同時也為日本順天堂大學醫學部附屬順天堂醫院感染管制主任，主要研究日本國內醫院的多重抗藥性細菌 (multi-drug resistant organisms, MDROs)之傳播情形，並制訂該國醫院預防與控制 MDROs 傳播的相關指引。為了減少醫療機構內 MDROs 的傳播，Dr. Satoshi Hori 推動在院內統計酒精性乾洗手液的使用量，以了解醫護人員手部衛生與醫療照護相關感染的關聯性；另為推動感染管制實務，Dr. Satoshi Hori 亦將感染管制措施相關技術列為客觀結構式臨床技能測驗(Objective Structured Clinical Examination, OSCE)測驗項目之一。

Dr. Satoshi Hori 與曾組長討論時表示，為監測日本國內抗生素抗藥性，日本政府提供誘因、鼓勵各醫院通報其抗藥性數據，並將數據分析結果回饋給各醫院。另表示國立臺灣大學醫學院附設醫院內科部副主任盛望徽醫師將於近期前往順天堂醫院參訪，進行醫院感染管制執行現況的交流。

4. 澳大利亞

Dr. Marilyn Cruickshank 為澳大利亞國家醫療照護相關感染管制計畫執行長，同時也為 APEC、WPRO 等重要會議的澳大利亞代表之一，並曾於 2015 年來臺灣參與第七屆亞太感染管制國際會議 (Asia Pacific Society of Infection Control, APSIC)。Dr. Marilyn Cruickshank 與曾組長分享，為降低醫療照護相關感染發生，澳大利亞除了推行預防 CLABSI、SSI、VAP 及 CAUTI 等組合式照護措施之外，每 18 個月常規對醫院進行感染管制查核，且將醫療機構之 MRSA 抗藥性比率及手部衛生遵從率等 2 項指標列為強制性必要通報項目，以監控並持續提升各醫院感染管制措施遵從情形及品質。

5. 菲律賓

Dr. Celia Carlos 為菲律賓熱帶醫學研究中心的副董事、同時也為菲律賓衛生署抗藥性監測計畫的執行長。Dr. Celia Carlos 表示，菲律賓之抗藥性監測系統採取指定特定醫院擔任監測哨點 (sentinel site) 進行通報，但不會公開各別醫院通報資料及其相關資訊；為了避免同一個案因有多件檢體導致重複通報，參與抗藥性監測的醫院一律使用 WHONET 軟體進行歸人。監測計畫例行每年開會，檢討感染管制及抗

藥性指標。

6. 馬來西亞

Dr. Victor K E Lim 現為馬來西亞國際醫學大學的副校長，同時也為 2013 年於馬來西亞吉隆坡舉辦之第 9 屆抗微生物製劑和抗藥性國際研討會 (International Symposium on Antimicrobial Agents & Resistance, ISAAR) 的主席，亦為 WHO、WPRO 馬來西亞代表之一。Dr. Victor K E Lim 表示，馬來西亞鼓勵感染科醫師參與感染管制工作，且為避免實驗室資料重複通報，採用 WHONET 軟體通報各醫院抗藥性資料；因採取自願通報方式，馬來西亞不會公布各別醫院通報資料，但會公布國內整體醫療照護相關感染及抗藥性之狀況。

三、心得與建議

抗微生物製劑抗藥性與醫療照護相關感染已成為全球共同關注的重要公共衛生議題，許多國際組織包括 WHO、APEC、GHSA、OIE、FAO、ECDC 等，都致力推動相關計畫及公布相關指引或綱要，期減緩其造成之威脅。美國於 2016 年 APEC 衛生工作小組會議(Health Working Group Meeting)所提出之「在亞太地區以 APEC-GHSA 架構強化感染管制基礎建設(APEC-GHSA Framework for Strengthening the Infection Prevention and Control Infrastructure in the Asia-Pacific Region)」的提案中(附錄 2)，規劃針對手部衛生(Hand Hygiene)、標準防護措施(Standard Precautions)、工作人力知識與技巧(Workforce Knowledge and Skills)、微生物實驗室量能(Microbiology Laboratory Capacity)、醫療照護相關感染監測與資訊公開(HAI Surveillance and Public Reporting)等主題，陸續提出相關策略方案。本次論壇以有效收集與應用監測資料，據以導入最適策略降低感染發生及提升醫療品質為主軸，並強調建立跨單位的合作夥伴關係使推行的工作成果得以延續，這和本署目前推動醫院透過資料自動交換機制進行微生物抗藥性與醫療照護相關感染通報、與統計處合作以健保申報資料分析抗生素使用情形、發展通報資料檢核與分析回饋機制、及透過醫院評鑑/感染管制查核及醫療發展基金獎補助計畫持續推動手部衛生與逐步導入各項侵入性醫療處置組合式照護措施等作為不謀而合；而由各經濟體分享資料亦可看出，美、日、韓、澳等國近年來皆以國家行動計畫和結合健康保險給付等方式，挹注相當資源推動醫療照護機構落實抗生素使用管理與感染管制，並獲得長足進步。有鑒於此，本署未來應持續關注國際間相關策略發展，結合我國監測數據分析結果，參考內化形成國內政策，以持續提升我國醫療照護機構感染管制品質，對抗抗藥性威脅，保障國人健康。

附錄1

Agenda

APEC Policy Forum: Strengthening Surveillance and Laboratory Capacity to Fight Healthcare Associated Infections and Antimicrobial Resistance

December 14-15, 2016
Ha Noi, Viet Nam
Fortuna Hotel

WORKSHOP OBJECTIVES

Building on the outcomes of the previous APEC - GHSA policy forum on Infection Prevention and Control (IPC) Infrastructure, the key objective of the workshop is to advance the implementation of work progressed under APEC to combat healthcare-associated infections (HAI) and antimicrobial resistance (AMR) in the Asia Pacific region. This will be done through:

- Sharing good practice examples and lessons learned on policy measures and procedures which drive good behaviour in Infection Prevention and Control (IPC) and AMR stewardship to enhance patient outcomes and increase health system efficiencies;
- Increasing knowledge of effective models of HAI surveillance and data collection systems - including new economy-level protocols for monitoring and reporting infection rates such as Patient-Reported Experience Measures (PREMs) and Patient-Reported Outcome Measures (PROMs);
- Promoting partnership opportunities to support policy development and enhance sustainable capacity building efforts within APEC economies to improve IPC interventions at all levels of the healthcare system; and
- Exploring policies and practices that drive innovation towards infection prevention, the development of and access to new antimicrobials, and the preservation of new and existing antimicrobials through rapid diagnostics and antimicrobial stewardship.

DAY ONE	14 December 2016
8.30 – 9.00 am	**Registration**
9.00 – 9.20 am	**Welcome Remarks** Professor Le Quang Cuong, Vice Minister, Ministry of Health, Viet Nam
9.20 – 9.40 am	**Keynote Speech** Dr. Anthony Mounts, Country Director, Division of Global Health Protection, Centre for Disease Control
9.40 -10.25 am	**Group Photo** **Participant Introductions** **Overview of the visit to the Bach Mai Hospital, Hanoi**
10.25 -10.45 am	**Coffee Break**
10.45 – 12.00 pm **Session 1**	**Surveillance systems for Healthcare Associated Infections and Antimicrobial Resistance** *The session will focus on CDC's work with partners such as the WHO in establishing surveillance systems for AMR and HAIs. The sesssion will also focus on specific surveillance systems established in healthcare settings in Viet Nam.* **Moderated by:** Dr. Ryan MacFarlane, Director, C&M International **Speakers:** • Dr. Neil Gupta, International Infection Control Program, Centre for Disease Control and Prevention, United States • Dr. Luong Ngoc Khue, Director General, Administration of Medical Service, Ministry of Heath, Viet Nam Questions and Answers
12.00 – 1.00 pm	**Lunch**

1.00 – 2.15 pm **Session 2**	**Delivering new treatments to patients** *Aligned with the directions of the Medan Principles this session will focus on examining collaborative approaches, policies, and practices to encourage and accelerate the discovery and development of new generations of antibiotics as well as policies to enable appropriate access to novel antimicrobials that optimize clinical outcomes while minimizing unintended consequences of antibiotic use.* **Moderated by:** Dr. Ryan MacFarlane, Director, C&M International **Speakers:** • Mr. Silas Holland, Director, Global Public Policy, Merck Sharp and Dohme (MSD) • Dr. Mei-Fang Chen, Senior Reviewer, Division of Medicinal Products, Food and Drug Administration, Chinese Taipei Questions and Answers
2.15 - 3.30 pm **Session 3**	**Best practices and tools for antimicrobial stewardship** *This session will cover tools currently available to help educate health care professionals and patients on the appropriate use of antimicrobials, promote the integration of rapid diagnostic and susceptibility testing to ensure the appropriate use of antimicrobials for the patients who need them.* **Moderated by:** Dr. Shevin T. Jacob, Acting Assistant Professor, Division of Allergy and Infectious Diseases, University of Washington **Speakers:** • Dr. Victor Lim, Pro-Vice Chancellor for Education, International Medical University, Kuala Lumpur, Malaysia • Dr. Doo Ryeon Chung, Prof of Medicine, Korea and Asia Pacific Foundation for Infectious Diseases (APFID) and Asian Network for Surveillance of Resistant Pathogens (ANSORP) • Dr. Le Thi Anh Thu, President of Ho Chi Minh City Infection Control Society, Cho Ray Hospital, Viet Nam • Dr. Huong Bui, Vice Head, Department of Food Microbiology and Molecular Biology, Viet Nam Questions and Answers
3.30– 3.45 pm	**Coffee Break**

3.45 – 5.15 pm **Session 4**	**Interactive Session - Key challenges and Constraints in implementing effective Healthcare Associated Infections and Antimicrobial Resistance in the APEC region** **Facilitators – US-ATAARI/CDC** *Participants will be organized into **six pre-assigned groups**. Each group will focus on a particular theme or issue which relate to a specific agenda item. These themes will also reflect the six support packages included in the APEC-GHSA Framework for Strengthening IP&C Infrastructure in the APEC Region.* *The objective of this exercise is to obtain a clear appreciation of what the current technical, institutional and capacity constraints/gaps are in implementing effective IP&C frameworks in the APEC region.* — *Participants will be asked to discuss the common challenges/constraints and capacity gaps they face in implementing activities under each of the key themes assigned to the groups.* — *Participants will then be asked to prioritize the identified institutional, clinical, and challenges/ and capacity gaps and discuss ways of addressing these issues.* — *In their report back to the plenary, groups will be asked to focus on three of the key technical, institutional and capacity constraints/gaps they face in their economies and the options for addressing these challenges.* **Report Back on Interactive Session** Questions and Answers
5.15 - 5.30 pm	**Summary Comments/Wrap Up Day 1**
DAY TWO	**15 December 2016**
8.30 - 9.00 am	**Registration**
9.00 – 9.10 am	**Welcome remarks and outline for Day 2**

9.10 – 10.30 am **Session 5**	**Key principles for developing Sustainable, Results-oriented and Scalable Partnerships in IPC** *Sustainable IP&C approaches require coordinated, and complementary efforts by many individuals and groups. This session will review best practice approaches adopted in APEC regionally and globally to promote effective and sustainable partnerships in IP&C.* **Moderator:** Dr. Marilyn Cruickshank, President Elect, Australasian College of Infection Prevention and Control **Speakers:** • Dr. Chris Colwell, Senior Director, Public Affairs, Greater Asia Becton Dickinson & Company (BD) • Ms. Natalie Hendler, Regional Senior Program Officer, Jhpiego Corporation • Dr. Li-Jung Chien, Section Chief, Division of Infection Control and Biosafety, Center for Disease Control, Department of Health, Chinese Taipei • Dr. Satoshi Hori, Professor/Director of Infection Control, Department of Infection Control Science, Juntendo University, Graduate School of Medicine, Tokyo, Japan. Questions and Answers
10.30 – 11.00 am	**Coffee Break**
11.00 – 12.15 pm **Session 6**	**Using Healthcare Associated Infection (HAI) data for action** *The objective of this session is to investigate how evidence-based measures and processes are used for IPC improvements in health settings in the APEC region and beyond.* **Moderated by:** Dr. Neil Gupta, International Infection Control Program, Centre for Disease Control and Prevention, United States **Speakers** • Dr. Marilyn Cruickshank - President Elect, Australasian College of Infection Prevention and Control, Australia. • Dr. Doo Ryeon Chung, Prof of Medicine, Korea and Asia Pacific Foundation for Infectious Diseases (APFID) and Asian Network for Surveillance of Resistant Pathogens (ANSORP), Korea. • Dr. Celia Carlos, Director, Research Institute for Tropical Medicine, the Philippines. • Dr. Go Tanaka, Councilor, Coordination Office of Measures on Emerging Infectious Diseases, Cabinet Secretariat, Japan. Questions and Answers
12:15 – 1:15 pm	**Lunch**

1.15 -2.15 pm **Session 7**	**Interactive Exercise (Part 2) - Key challenges and Constraints in implementing effective Healthcare Associated Infections and Antimicrobial Resistance in the APEC region** **Facilitators – US-ATAARI/CDC** *This exercise follows on from the exercise on Day 1 where participants were asked discuss and prioritize the specific technical, institutional and capacity constraints/gaps they faced in establishing appropriate strategies and policy frameworks to address HAI and AMR.* *The objective of this follow up session will be to build consensus on how best to address identified capacity constraints/gaps and challenges within the APEC context. This is expected to inform future technical and capacity building activities to be supported within APEC.* — *Participants will continue to work in the same groups as Day 1 to discuss further the potential solutions or activities to address the three prioritized challenges/constraints.* — *The final part of the exercise will be for participants to prioritise these solutions or activities. When reporting back to the plenary, participants will outline the reasons for prioritizing the solutions.* **Report Back on Interactive Session** Questions and Answers
2.15 – 2.30 pm	**Wrap-up and Evaluation**
2.30 – 5.30 pm	**Field Trip to Bach Mai Hospital – Ha Noi, Viet Nam**

附錄2

Asia-Pacific Economic Cooperation

2016/SOM1/HWG/035
Agenda Item: 14

APEC-Global Health Security Agenda Framework for Strengthening Infection Prevention and Control Infrastructure in the Asia-Pacific Region

Purpose: Information
Submitted by: United States
Forum Doc. No.: 2015/AMM/015app17

APEC PERU 2016

Health Working Group Meeting
Lima, Peru
27-28 February 2016

APEC-GHSA Framework for Strengthening the Infection Prevention and Control Infrastructure in the Asia-Pacific Region

Representatives of APEC Member Economies, GHSA Member Countries, international organizations, civil society, and the private sector convened in Seoul, Republic of Korea on 7-8 September 2015 for the *APEC-GHSA Policy Forum on Infection Prevention and Control (IPC) Infrastructure*.

Participants recognized that the serious Ebola and MERS-CoV outbreaks during the past year elevated the need to work together to strengthen the IPC infrastructure and to be better prepared to address future outbreaks. Participants further agreed that APEC Economies should engage in partnerships among and with other governments, international organizations, academia, civil society, and the private sector to share best practices and innovative strategies in order to strengthen the IPC infrastructure in the Asia-Pacific region.

Participants endorsed the *APEC-GHSA Framework for Strengthening the Infection Prevention and Control Infrastructure* as well as the *APEC-GHSA Support Package on Hand Hygiene*. Additional Support Packages on Standard Precautions, Workforce Knowledge and Skills; Microbiology Laboratory Capacity; HAI Surveillance and Public Reporting will be developed over the next year. These action-oriented documents covering key areas of the healthcare infrastructure identify actions and recommendations for governments and healthcare facilities.

Standard Precautions and Hand Hygiene

APEC Economies should promote the importance of consistent application of IPC practices and the respective roles of organizations and healthcare workers to identify and promote IPC practices and precautions for preventing the transmission of infection.

Participants agreed that APEC Economies are encouraged to enhance efforts to promote hand hygiene compliance within all healthcare facilities. Hand hygiene is considered the cornerstone of IPC and is the single most effective measure to reduce healthcare-associated infections (HAIs), particularly in low-resource settings.

Furthermore, it was agreed that APEC Economies and healthcare facilities should seek to ensure that hand hygiene infrastructure includes the facilities, equipment, and products required to achieve optimal hand hygiene practices within the facility as detailed in the *WHO Guidelines on Hand Hygiene in Health Care*, including alcohol based handrub at all points of care; a continuous supply of clean, running water; a sink:bed ratio of at least 1:10; soap; and single-use paper towels at each sink.

Hand hygiene needs to be a priority of all health facility personnel including those who may not be involved in the actual patient care. This will include (but is not limited to) the hospital administration, personnel, engineers, cashiers, janitors, guards etc.

APEC Economies should encourage and introduce a culture change where proper hand washing becomes a daily habit for everyone in the healthcare facility and proper hand washing is done whether or not somebody is watching. APEC Economies discussed how professional organizations, academic institutions, and the private sector can offer a great deal of expertise in innovative strategies for changing hygiene behavior. APEC Economies should leverage public-private collaboration to drive compliance with hand hygiene through hand washing, hand drying, and facilities maintenance.

Workforce Knowledge and Skills

Organisms are easily transmitted from patient to patient when healthcare professionals do not comply with IPC measures or when the environment is not properly disinfected. In many developing economies where

established IPC programs and properly trained staff are absent, healthcare workers have little means of developing an awareness of the infection risk they pose to patients or the value of complying with even the most basic IPC measures, such as hand-hygiene and standard precautions. Participants agreed that governments and key stakeholders should enhance efforts to ensure all healthcare facilities in the Asia-Pacific region are equipped with healthcare workers properly trained in basic IPC Knowledge and Skills.

Efforts should seek to sustain and strengthen healthcare workers' expertise and practice and to advance workforce development and training, ensuring that core capacities are not eroded due to economic or other constraints. An important component of these activities is documenting and communicating the value, effectiveness, and impact of core IPC knowledge and skills. Participants also promoted participation of the IPC workforce in international and regional professional societies.

Furthermore, a multiplier effect for workforce basic IPC knowledge and skills should be encouraged. Basic IPC orientation and training should be made available to every batch of new healthcare employees, student nurses and medical students who train in the health facility. The training should include a demonstration of basic techniques or skills (such as proper hand hygiene, proper donning and doffing of personal protective equipment, proper handling of sharps, proper waste disposal). Training assessments should also be carried out to ensure the techniques or skills were learned and are applied in practice.

Microbiology Laboratory Capacity

Diagnostic testing to detect and characterize infectious pathogens is an integral component of day-to-day responsibilities at clinical laboratories and the essential means of identifying HAIs. When those agents are rare or unknown, localities work with national and global infectious disease laboratories, which serve as diagnostic reference centers for all infectious disease threats.

APEC Economies are encouraged to work together to ensure that every healthcare facility has access to a microbiology laboratory that can generate quality data and follow standard protocols. Within the laboratory, quality standards and performance should be maintained at the highest levels possible. The collaboration among infection control staff, the laboratory, and clinical units will facilitate an exchange of information and improve data collection.

A responsible laboratory representative, among others, should be a member of the Infection Control Committee (ICC) within a health facility to facilitate and strengthen interdepartmental partnership of the ICC with the Laboratory Department.

Academic institutions and the private sector also have significant expertise in developing and implementing diagnostic and laboratory tools. APEC Economies are encouraged to form additional partnerships to train microbiologists and laboratory managers.

HAI Surveillance and Public Reporting

Surveillance is essential to IPC. The collection, analysis, and dissemination of surveillance data have been shown to be the most important factor in the prevention of HAIs. A surveillance program should include standardized definitions for infections; a defined population under surveillance; identification of data source; selection of a method for surveillance with good sensitivity; and distribution of reports and feedback.

The true magnitude of the global HAI problem is not known because surveillance and reporting are inadequate in many countries. The WHO has referred to HAIs as a "hidden, cross-cutting problem," and has concluded that there is a lack of quality studies on the issue and an insufficient number of functional surveillance systems.

Participants agreed that hospitals and other healthcare facilities should be required to monitor infection rates. They also should be required to report their HAI rates to a credible public entity and the data should be publicly available. This enhances accountability and provides patients and policymakers with access to individual healthcare facility quality measures.

Policymakers should establish measurable HAI reduction targets that are to be achieved over a defined period of time. Baseline HAI rates should be established in each hospital so that individual hospitals can be measured in their progress in reducing HAIs.

Public-Private Partnerships

The fulfillment of the GHSA's vision of a world safe and secure from infectious disease threats requires the sustained, coordinated, and complementary efforts of many individuals and groups. The *APEC-GHSA Framework for Infection Prevention and Control Infrastructure* is designed to advance these efforts, optimally used in multiple capacities such as:

- Working with national and local Ministries of Health to sustain and upgrade IPC fundamentals.
- Providing assistance to healthcare partners in their efforts to eliminate HAIs in hospitals and other healthcare venues.
- Collaborating with partner organizations to increase action and advance policies that improve IPC.
- Educating populations about the interconnected efforts to needed to prevent and control healthcare-associate infections, empowering them to improve and protect their health and that of their families.
- Encouraging partnerships with academia, especially medical and nursing schools, to educate students on the importance of infection control and prevention, AMR, HAIs and the impact of emerging and re-emerging infections on global health safety and security.

Public Policy Frameworks and Incentives

Many HAIs can be prevented when public policy requires and incentivizes healthcare facilities to implement comprehensive IPC practices.

Participants agreed that public policy can improve the IPC infrastructure by:

- Linking adherence to IPC guidelines with financial incentives. Positive incentives that include an appropriate financial reward (increase in payment, insurance credits, etc) can help drive action at the healthcare institution level.
- Developing public networks that enable healthcare facilities and Ministries of Health to monitor HAIs and track successes and areas for improvement.
- Promoting work with hospital associations and quality-improvement organizations to expand the roles in HAI Prevention. The domestic and/or international step-wise accreditation of public and private healthcare facilities within APEC Economies can help drive improvements in the IPC infrastructure.
- Developing strategies for sustaining and expanding public/private collaborations to improve healthcare quality.

Activities to modernize IPC capacities within APEC economies also support ongoing efforts to improve performance of local health agencies (e.g, national voluntary accreditation activities); to install a culture of continuous program improvement across all activities; and to help build staff capacity for implementing, monitoring, and evaluating IPC programs.

Next Steps

Participants agreed to convene in 2016 to assess progress on the implementation of the *APEC-GHSA Framework and Infection Control Support Packages*.

APEC-GHSA INFECTION PREVENTION AND CONTROL SUPPORT PACKAGE: HAND HYGIENE

Supports the following GHSA Action Packages: Workforce Development; Antimicrobial Resistance.

Optimal hand hygiene behavior is considered the cornerstone of infection prevention.[1] Hand hygiene is the single most effective measure to reduce healthcare-associated infections (HAIs), particularly in low-resource settings. Estimates suggest that 20-30% of HAIs could be prevented through good hand hygiene. Despite being a simple action, there is a severe lack of hand hygiene compliance in the Asia-Pacific region and globally. Many APEC economies lack the necessary resources to effectively promote good hand hygiene compliance to prevent the transmission of pathogens along with meeting other important core components of an infection prevention program.[2]

Research has shown that when implemented, hand hygiene programs significantly increase compliance amongst health care workers and reduce the prevalence of HAIs and other bloodstream, drug-resistant and intensive care infections.[3] Hand hygiene programs are cost-effective and result in sizeable net cost savings as compared to the costs required to prevent one episode of HAI from a healthcare perspective. Researchers in one 4 year hospital-wide hand hygiene program found the net benefit of the program to exceed $5.2 million.[4]

Building an effective infection prevention and control infrastructure in the Asia-Pacific region requires a commitment from APEC Economies and healthcare facilities to promote good hand hygiene and to fund and implement improvements in the hand hygiene infrastructure and in hand hygiene interventions.

The hand hygiene infrastructure includes the facilities, equipment, training, and products required to achieve optimal hand hygiene practices within the facility as detailed in the *WHO Guidelines on Hand Hygiene in Health Care*. The hand hygiene infrastructure is not complex. According to the WHO, it requires the following: availability of alcohol based handrub at all points of care; a continuous supply of clean, running water; a sink:bed ratio of at least 1:10; soap; and single-use paper towels at each sink.[5]

Hand hygiene interventions include both single and multi-level interventions that include staff and/or patient education and involvement, feedback initiatives, cultural change, organizational change, social marketing, additional sinks and alcohol dispensers, or a combination of the above. Advocates of hand hygiene improvement interventions recommend that multimodal interventions are needed to induce sustained hand hygiene practice improvements and should be based on theories of behavior change.[6]

APEC Economies, healthcare facilities, and key stakeholders should work together to achieve good hand hygiene compliance through the following actions:

I. [1] Role of hand hygiene in healthcare-associated infection prevention http://www.journalofhospitalinfection.com/article/S0195-6701%2809%2900186-8/fulltext

II. [2] Promoting hand hygiene in the Asia Pacific region http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3239484/

[3] Chen Y-C, Sheng W-H, Wang J-T, Chang S-C, Lin H-C, Tien K-L, et al. (2011) Effectiveness and Limitations of Hand Hygiene Promotion on DecreaSing Healthcare-Associated Infections. PLoS ONE 6 (11): e27163. doi: 10.1371/journal.pone.0027163.

[4] Ibid.

[5] WHO Hand Hygiene Self-Assessment Framework 2010 http://www.who.int/gpsc/country_work/hhsa_framework_October_2010.pdf

[6] Making Health Care Safer II: An Updated Critical Analysis of the Evidence for patient Safety Practices. 2013 Agency for Healthcare Research and Quality. No. 211

For APEC Economies:

- APEC Economies should make improved hand hygiene adherence a domestic priority and consider provision of a government-funded, coordinated implementation program while ensuring monitoring and long-term sustainability.
- APEC Economies should promote hand hygiene at the community level to strengthen both self-protection and the protection of others.
- APEC Economies should encourage healthcare settings to use hand hygiene as a quality indicator.
- APEC Economies should adopt and ensure the universal implementation of the WHO Guidelines on Hand Hygiene in Health Care.
- APEC Economies should also promote the use of the internationally-recognized self-assessment tools, such as the *WHO Hand Hygiene Self-Assessment Framework*, to obtain a situation analysis of hand hygiene promotion and practices within an individual health-care facility.
- APEC Economies should sign-on to and implement the *WHO Clean Care is Safer Care* to ensure that infection control is acknowledged universally as a solid and essential basis towards patient safety and supports the reduction of health care-associated infections and their consequences.

For healthcare administrators

- Ensure that conditions are conducive to the promotion of a multifaceted, multimodal hand hygiene strategy and promote a patient safety culture.
- Make improved hand hygiene adherence (compliance) an institutional priority and provide appropriate leadership, administrative support, and financial resources.
- In the budget development process, Healthcare administrators should recognize the return on investment in hand hygiene programs. Hand hygiene programs are cost-effective and result in sizeable net cost savings as compared to the costs required to prevent one episode of HAI from a healthcare perspective.[7]
- Ensure that healthcare workers have a role in decisions made related to the facilities, equipment, and product concerning hygiene. Ensuring optimal hygiene should be the first priority of healthcare workers, environmental stewards, as well as facilities and building managers.
- Provide healthcare workers with an appropriate number of sinks as well as a continuous supply of clean, running water and soap. Healthcare workers must wash hands with soap and water when they are visibly dirty or when exposure to potential spore-forming organisms is strongly suspected or proven. The WHO recommends five key moments when health care workers should practice hand hygiene: before patient contact, before an aseptic task, after bodily fluid exposure, after patient contact, and after contact with patient surroundings.
- Provide healthcare workers, patients, and visitors with access to single-use paper towels. According to the WHO, drying hands thoroughly with single use paper towels helps prevent cross contamination from wet hands, into the air and onto the rest of the body.[8] Studies show that many people do not wash their hands properly,[9] and therefore microbes remain on hands after washing and are more easily transferred if hands are not properly dried. Damp hands transmit 500 times more

[7] Chen Y-C, Sheng W-H, Wang J-T, Chang S-C, Lin H-C, Tien K-L, et al. (2011) Effectiveness and Limitations of Hand Hygiene Promotion on DecreaSing Healthcare-Associated Infections. PLoS ONE 6 (11): e27163. doi: 10.1371/journal.pone.0027163.

[8] Parts 1.2 and 1.3 of the *WHO Guidelines on Hand Hygiene in Health Care 2009.*

[9] Borchgrevink, C, et al. (2013) Journal of Environmental Health.

bacteria than dry hands. Drying hands with a single use paper towel reduces microbe count by 76%.[10]

- Healthcare administrators should ensure the availability of alcohol-based handrubs at all points of care. Alcohol-based handrubs with optimal antimicrobial efficacy usually contain 75 to 85% ethanol, isopropanol, or n-propanol, or a combination of these products. The WHO-recommended formulations contain either 75% v/v isopropanol, or 80% v/v ethanol.[11] Alcohol based handrubs render the hands safe in terms of transmission of pathogens, and can be used at the very place where pathogens are transmitted. Alcohol-based handrubs are considered by the WHO to fulfil the highest standards of safety in relation to the prevention of cross-infection. However, if exposure to potential spore-forming pathogens is strongly suspected or proven, including outbreaks of Clostridium difficile, hand washing with soap and water is the preferred means.
- Healthcare administrators should ensure that the water supply is physically separated from drainage and sewerage within the health-care setting and provide routine system monitoring and management.

[10] Parts 1.2 and 1.3 of the *WHO Guidelines on Hand Hygiene in Health Care 2009.*
[11] WHO Hand Hygiene Technical Reference Manual http://www.who.int/gpsc/5may/tools/training_education/en/index.htm

疾病管制署國際人脈清單

會面日期	所屬機構/單位	會面人員姓名	職銜	專長	國別	會面場合(會議或正式拜會)	拜會目的	聯繫方式(電郵/電話/傳真)	填報人員	本署參與拜會之人員	備註
2016/12/14-15	Australian College of Infection Prevention and Control	Marilyn Cruickshank	President Elect	Infection Control, Infectious Diseases	Australia	會議	交流	Marilyn.Cruickshank@safetyandquality.gov.au /(02) 9126 3586 / cell phone 0423 842 897	簡麗蓉	曾淑慧、簡麗蓉	
2016/12/14-15	CDC	Neil Gupta	Medical Officier	Internal Medicine, Preventive Medicine, Infection Control	USA	會議	交流	Ngupta1@cdc.gov /404-639-3122 /404-639-4043	簡麗蓉	曾淑慧、簡麗蓉	
2016/12/14-15	CDC	Anthony (Tony) Mounts	Country Director, Vietnam	Pediatrics, Internal Medicine, Infectious Diseases	USA	會議	交流	amp8@cdc.gov /(84-4)3935-2094 /(84-4)3935-1918 /cell phone (84)(0) 9048-94183	簡麗蓉	曾淑慧、簡麗蓉	
2016/12/14-15	Coordination Office of Measures on Emerging Infectious Diseases, Cabinet Secretariat, Government of Japan	Go Tanaka	Councilor	Pediatrics, Public Health, Infectious Diseases	Japan	會議	交流	go.tanaka@cas.go.jp /+81-3-6257-1307 /+81-3-3501-3973	簡麗蓉	曾淑慧、簡麗蓉	
2016/12/14-15	Juntendo University, Graduate School of Medicine	Satoshi Hori	Professor and Chair of Infection Control	Infection Control, Infectious Diseases	Japan	會議	交流	shori@juntendo.ac.jp /+81-3-3813-3111 ext 70331 /+81-3-5840-5791	簡麗蓉	曾淑慧、簡麗蓉	
2016/12/14-15	Samsung Medical Center	Doo Reyon Chung	Director	Infection Control, Infectious Diseases	South Korea	會議	交流	iddrchung@gmail.com /+82-2-3410-0323 /+82-2-3410-0064 /cell phone +82-10-9933-0323	簡麗蓉	曾淑慧、簡麗蓉	

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