出國報告（出國類別：開會）

出席第 7 屆日內瓦健康論壇

服務機關：衛生福利部國民健康署
姓名職稱：王英偉署長、賈淑麗組長、陳龍生研究員
派赴國家：瑞士日內瓦
出國期間：107 年 4 月 8 日至 107 年 4 月 14 日
報告日期：107 年 6 月 27 日

(本項出國經費由菸品健康福利捐支應)

摘 要

我國向來在公共衛生所做的努力是世界有目共睹，但歷年來由於國際情勢，我國難以進入世界衛生組織，分享我國對於公共衛生及醫療之重要經驗。因此，就國家立場而言，希望透過任何型式及場合將台灣經驗宣傳至世界任一角落，而日內瓦是世界衛生組織本部所在地，每年都會有大大小小的會議進行，而我國駐日內瓦辦事處及衛生福利部國民健康署也希望透過任何會議與形式的交流，宣傳我國對於公共衛生及醫療之成就與貢獻，並分享經驗。因 2018 年世界衛生組織將於 5 月舉辦大會，國民健康署及駐日內瓦辦事處希望藉由參與日內瓦建康論壇(Geneva Health Forum, GHF)，以增加台灣在健康議題所努力的能見度，藉此機會讓其他國家認識台灣，也分享台灣於慢性病防治所做的努力。

論壇三天會議期間，除了有七場主題演講外，場外更有包括學校、醫院及醫療相關單位展示與大會數位化主題相關之創新科技，包括了虛擬體驗、醫院數位發展等等。主題演講包括透過數位化提高健康服務系統之品質、E-health 應用於教育、預防保健等、應用數位化科技發展以病人為中心的可近性服務、資訊安全與健康系統：病人風險、區塊鏈對全球健康之影響、對於醫療專業數位化發展保留了那些重要地方、AI 的發展及急性傳染病在數位發展之應用。

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壹、 緣起與目的

日內瓦健康論壇是由日內瓦大學自 12 年前(2006 年)開始，由 Geneva University Hospitals (HUG)及日內瓦大學醫學系, Swiss and International organizations 所共同發起並執行，是日內瓦每兩年之國際會議，並固定於日內瓦舉辦。主要訴求是希望透過該會議可以建立或連結各個國家目前針對健康議題所提出之政策進行探討及分享，每一次大會針對一個主題進行多面向討論，因此會有多個 parallel section 同時進行，該會議主要結合四大面向：(1)Academic/ Research (2)Governance/ Policy (3)Public/ Private (4)Field/ Practice，邀請來自各國研究學者、政府或 NGO 衛生政策推動者、學生等等專業人員共同討論，藉此平台可以資源互享，也可作為通常於五月份舉辦之 WHO 會議之會前會。每二年舉辦一次。該論壇自詡為「全球健康創新實踐的論壇，the forum of innovative practices in global health」。

今年(2018)是該論壇第 7 屆，於 2018 年 4 月 10 日至 4 月 12 日在日內瓦國際會議中心(Centre International de Conférences de Genève, CICG)辦理，主題為「Precision Global Health in the Digital Age」，來自歐洲各國及 WHO 助理幹事長 Naoko Yamamoto 都出席會議(WHO 幹事長 Tedors 原預計參與後因要務以錄影方式表達對會議之重視)約

計近 1000 名學者及專家參與。此次大會主要針對全世界各國重視的資訊及 AI 議題進行討論，主題以資訊及健康之相互應用所帶來的影響為主軸，包括下列：

一、 於開發中國家利用資訊提升健康照護：雖這些國家於資源上比較缺乏，但由於資訊開發速度相當快，因此相當多國家應用手機、視訊等裝置，開發健康照護相關軟體以提高民眾健康識能，並與多個國家共同合作及開發，以邁向 Sustainable Development Goals (SDGs)為目標。

二、 應用大數據科技輔助醫療決策、加強病安及提高照護成效、生活品質：各個國家皆不約而同啟動健康大數據應用，包括精準化疾病照護、傳染病偵測、疾病流行病學變遷、環境污染偵測及警示等等，進一步開發預測系統，能早期偵測出 outbreak，作完善的防護措施。

三、 大數據之資訊安全新發展：由於 Facebook 個人資料外洩事件，2018 年 5 月 25 日歐盟 GDPR(General Data Protection Regulation, GDPR)實施最嚴格的個人資料保護，可見得目前歐洲國家對於資料應用及保護相當重視，而如何在這大數據的時代中，在完善的資料安全下並充分利用大數據所帶來的益處，是相當具有挑戰性。其中以區塊鏈 block-chain model 是目前最受注目的議

題，如何將此金融界模式應用到人類健康資訊、行為訊息、遺傳基因及表現作為研究或知識開發等使用，為相當前衛性切入點，其執行模式更需要其他機制輔助方能實現。

另外，論壇還討論應用數位科技來改變全球健康實務，包括生活科學、社會科學及資料科學等。同時討論創新科技發展的目的、使用及如何評估效應。今年會議還有幾個重要議題與發展，包括聚焦亞洲為中心、女性角色、年輕學者的未來等等。

貳、 與會期間與參與人員

國民健康署積極參與日內瓦健康論壇，由王英偉署長率領國民健康署慢性疾病防治組賈淑麗組長與監測研究組陳龍生研究員與會，同時為辦理台灣專場，本次邀請台灣糖尿病醫學會許惠恒理事長(台中榮民總醫院院長)及台大公衛學院副院長陳秀熙教授共同參與。自 107 年 4 月 8 日啟程前往瑞士日內瓦，並於 4 月 14 日返抵臺灣。主要工作內容包含參與日內瓦健康論壇大會議程、海報展示、辦理平行論壇專場與當地非政府組織及專家學者會談可能合作事宜等。行程重點說明如下：

日期	星期	行程紀要
4 月 8 日	日	自桃園國際機場啟程赴瑞士日內瓦

4 月 9 日	一	1. 於巴黎機場轉機，中午抵達日內瓦，由駐日內瓦代表處派車接送。 2. 會議場地探勘。 3. 晚上由駐瓦處陳大使宴請與會人員。
4 月 10 日	二	1. 大會報到及參加大會開幕式（Congress Opening Ceremony） 2. 參加日內瓦健康論壇 3. 與 Mayo Clinic scientific director Dr. Nilay Shih、臺大陳秀熙老師團隊進行未來合作討論
4 月 11 日	三	1. 參與大會專場（Plenary Session）及平行場次 2. 與專家學者雙邊會議進行未來合作之討論 3. 本署午間專場
4 月 12 日	四	1. 參與大會專場（Plenary Session）及平行場次 2. 參與閉幕式 3. 參加駐日內瓦代表處與 UICC 合作討論會議
4 月 13 日	五	自瑞士日內瓦啟程返台
4 月 14 日	六	返抵國門

參、 第 7 屆日內瓦健康論壇重點

一、 高品質的健康照護系統(High Quality Health System)

(一)高品質的健康照護系統是在特定環境下，優化民眾健康狀況。

(二)始終如一地提供改善或維持健康的照護，以受到所有人的重視和信賴。

(三)健康照護系統必須回應不斷變化的人口需求。

(四)必須改善超出照護範圍的照護，僅僅關心照護率而不關心照護品質，則是本末倒置的作法。

(五)在開發展中國家，民眾少於 1/2 有臨床醫療，一個骨科手術平均要等 12 天，涵蓋率(coverage)不能等於 save。

(六)民眾需要醫療改變，但我們卻從不發覺他們的期待，我們必須認真聽民眾聲音。

二、 健康照護品質至關重要

政策實踐與 Alma Ata 宣言-世衛組織論點(The quality imperative: policy practices and the Alma Ata Legacy-WHO pivot point)。

(一)高品質照護必須同時考量病人安全。

(二)開發中國家疾病診斷率低於 34%。

(三)何謂全民健康覆蓋(Universal health coverage, UHC)?是指服務覆蓋和病人覆蓋率兩者都必須兼具，以確保健康的生活，並促進

各年齡層人群的健康。

(四)UHC monitoring 中必須納入包括對經濟對品質的影響。

(五)加強以人為中心的整合性衛生服務。

(六)有八個元素可以對高品質政策與策略進行檢視，包括國家衛生預防政策、品質定義、利益相關者參與、情況分析，治理和組織結構，改進方法和介入措施，衛生管理訊息系統和數據系統。

(七)沒有包括初段預防及滿足民眾健康需要的服務，不能稱之為高品質的健康服務，初級預防保健涵蓋了 80-90%的健康需要。

(八)Alma Ata 宣言提供了一個重新啟動初級健康照護(Primary health care, PHC)的機會，讓政府及各界檢視 PHC 的作為及成果。

(九)什麼是國家品質方針和策略？一個國家有組織地努力促進和規劃提高照護品質。通常會建立政府制定的服務方向與大綱，說明提高整個國家健康照護系統的在預防保健品質所需的方法和行動，這些需要與更廣泛的國家衛生政策和規劃過程密切聯繫，這些制度建立通常由衛生部負責，並與相關決策者和實施者密切合作。

三、 E- Health

(一)國家層面的挑戰：面臨不協調，理解力差以致於無法理解數位化系統的相關資訊。

(二)數位健康：可藉由數據的彙整提供民眾健康地圖，各式健康數字的彙整、輸入是非常重要的關鍵。

(三)服務的指引需要應用實證為基礎的醫療(Evidence Base Medicine)

(四)WHO 的數位化健康介入指引，在提供指引的同時必須有相關工具包(toolkit)來輔助說明。

(五)經過計算過後的介入措施：所有服務的提供都必須深思熟慮，包括與主要對象的溝通、健康服務提供者的數位訓練、數位決策的支持、個案健康紀錄、出生和死亡通知、監測供應鏈、服務提供者之間的溝通/遠距醫療、促進遠距個案應與遠距醫療與服務提供者間的溝通

(六)電子健康紀錄(Electronic Health Record；EHR):收集病人所有資訊，提供健康者雙向溝通，重要的是其中有一個重要角色就是 EHR 的 reviewer,並對 Data 進行檢視。

(七)健康資訊系統是一個生態系統，數位化健康的基礎設施是一個生態系統，在生態系統中，民眾直接或間接獲取的所有福利狀況分析。分析生態系統服務可讓社會各界知道使用和破壞生態系統所得到經濟價值和應付成本，為各國領袖提供決策的指引。

(八)永續發展指標(SDG) 3 達成目標所面臨存在的問題：重複冗長、不斷的提高成本、無法相輔相成、有限/無法重複使用且互不相干、互不相干的投資、相關的解決方案無法讓提供者能有全面且系統性思維、僅是有限的局部需求、沒有規模經濟、對整體照護系統影響有限、無法考慮使用者各自狀況、難以監控及管理等等，上述這些問題非政府組織可以處理。

(九)補充說明：

SDG 3：確保健康的生活並促進所有年齡層的人的健康

3.1 到 2030 年，全球孕產婦死亡率將降至每十萬個活產嬰兒 70 以下。

3.2 到 2030 年，可以預防新生兒和 5 歲以下兒童死亡，所有國家的新生兒死亡率至少降低到每千名活產嬰兒 12 名，5 歲以下兒童的死亡率降至每千名 25 名活產。

3.3 到 2030 年，結束愛滋病，肺結核，瘧疾和被忽視的熱帶病的傳染病，防治肝炎，水傳播疾病和其他傳染病。

3.4 到 2030 年，通過預防和治療將非傳染性疾病的過早死亡率降低三分之一，促進精神健康和福祉。

3.5 加強藥物濫用的預防和治療，包括麻醉藥品濫用和有害使用酒精。

3.6 到 2020 年，全球道路交通事故死亡人數將減少一半。

3.7 在西元 2030 年前，確保全球都有管道可取得性與生殖醫療保健服務，包括家庭規劃、資訊與教育，並將生殖醫療保健納入國家策略與計畫之中。

3.8 實現全民健康覆蓋（以下簡稱 UHC）的目標，包括財務風險保護，取得高品質基本醫療保健服務的管道，以及所有的人都可取得安全、有效、高品質、負擔得起的基本藥物與疫苗。

3.9 到 2030 年，大幅減少危險化學品和空氣，水和土壤污染以及污染造成的死亡和疾病。

3.a 強化煙草管制架構公約在所有國家的實施與落實。

3.b 對主要影響開發中國家的傳染以及非傳染性疾病，支援疫苗以及醫藥的研發，依據杜哈宣言提供負擔的起的基本藥物與疫苗；杜哈宣言確認開發中國家有權利使用國際專利規範-與貿易

有關之智慧財產權協定（以下簡稱 12 TRIPS）中的所有供應品，以保護民眾健康，尤其是必須提供醫藥管道給所有的人。

3.c 大大增加衛生籌資以及發展中國家，特別是最不發達國家和小島嶼發展中國家衛生人力的徵聘，發展，培訓和留用。

3.d 加強所有國家，特別是發展中國家的能力，以進行預警，減少風險和管理國家和全球健康風險。

四、 區塊鏈與全球健康(Block chain for global health)

隨著醫院網路安全性攻擊的次數增加，民眾對於健康照護的資料隱私與保護已逐漸重視。Prof. Jean-Pierre Hubaux 介紹了安全的概念： "the rightful access to data, ensuring access control, availability, audibility and accountability", 而隱私則為"rightful use of data following legal imperatives and expressed wishes of the data owner". 目前有兩種重要的加密方法，以確保個人健康資料之安全。區塊鏈技術的發展，因此應用於健康資料上。

(一)甚麼是區塊鏈 block chain?透過整合研究結果、資料來源、基因庫及各式醫療資料，以病人為中心進行資料分享與應用。

(二)DPPH(Data Protection in Personalized Health) 在個人健康上進行資料的保護。

(三)DPPH 是由五個研究中心組成，同時有政府科資中心加入。每年 3 百萬瑞士法郎，為期 3 年，主要計畫在於個人化的健康和相關技術。

(四)目標包括：

1. 解決數據共享上的主要隱私、安全性、可擴展性和道德的挑戰，以實現有效的 P4 醫學(P4 是指 Predictive, Preventive, Personalized and Participatory)。
2. 定義可用性、可擴展性和數據保護之間的最佳平衡。
3. 佈署適當的一套或多個計算工具

(五)DPPH 在區塊鏈中的角色與功能：病人就醫時，每個醫院就其資料透過 IT 技術進行資料收集，並匯集至 DCC(data coordination center)，DPPH 提供了相關資料依個人狀況進行整合及相關保護分析，包括了可近性控制的分佈狀況，分佈狀況在個人隱私上的處理，來源和可重複性與大數據平台。

(六)電腦科技提供了許多工具來協助問題解決，包括了提供密碼及個人隱私辨別等。

(七)對於區塊鏈可讓重要關係人瞭解(包括醫院)如何收集並管理這些機敏性資料。

(八)補充說明區塊鏈：

1. 它是一種「將資料寫錄的技術」，是一個「去中心化的分散式資料庫」，透過集體維護讓區塊鏈裡面的資料更可靠，或是可以把它理解成是一個全民皆可參與的電子記帳本，一筆

一筆的交易資料都可以被記錄。

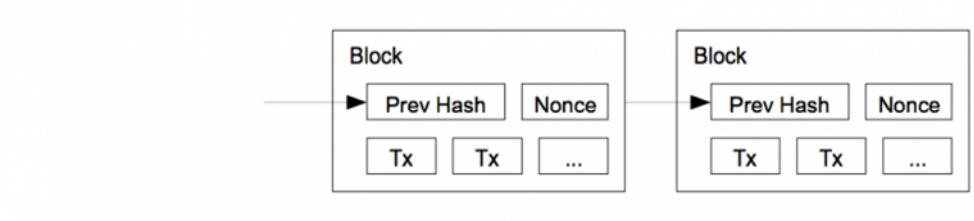
2. 區塊鏈技術可以說是互聯網時代以來，最具顛覆性的創新技術，依靠複雜的密碼學來加密資料，再透過巧妙的數學分散式演算法，讓互聯網最讓人擔憂的安全信任問題，可以在不需要第三方介入的前提下讓使用者達成共識，以非常低的成本解決了網路上信任與資料價值的難題。

3. 區塊鏈有幾個最重要的特色，首先就是它的核心宗旨-去中心化，為了強調區塊鏈的共享性，讓使用者可以不依靠額外的管理機構和硬體設施、讓它不需要中心機制，因此每一個區塊鏈上的資料都分別儲存在不同的雲端上，核算和儲存都是分散式的，每個節點都需要自我驗證、傳遞和管理，這個去中心化是區塊鏈最突出也是最核心的本質特色。

4. 在去中心化的前提之上，每個運算節點的運作方式就會透過「工作量證明機制（Proof of Work，POW）」來進行，也就是誰先花費最少的時間，透過各自的運算資源來算出答案並得到認可它就成立，如此一來就可以實現多方共同維護，讓交易可以被驗證。

5. 區塊鏈的另一大特色是其「不可竄改性」，區塊鏈中的每一筆資料一旦寫入就不可以再改動，只要資料被驗證完就永久

的寫入該區塊中，其中的技術是透過 Hashcash 演算法，透過一對一的函數來確保資料不會輕易被竄改，這種函數很容易可以被驗證但卻非常難以破解，無法輕易回推出原本的數值，資料也就不能被竄改，每個區塊得出的值也會被放進下一個區塊中，讓區塊鏈之間的資料也都被正確的保障。



工作量證明（Proof of Work）。圖/比特幣白皮書

五、國民健康署辦理之午間論壇：

主題：Information Technology as an innovative approach to address Non-Communicable Disease

日期: 4 月 11 日

時間: 12:30-14:00

主持人：國民健康署王英偉署長、

Prof. Bettina Borisch, CEO, World Federation of Public Health Association

本次中午會議由國民健康署主辦，結合大會主題及宣揚我國對於健康方面之發展及成就，同時希望透過該會議呼籲大家對慢性病之重視，進而提高疾病預防，因此本次午間論壇主題訂為資訊科技創新應用於慢性病管理，並安排我國學者及國外學者以穿插方式進行演講及對談，希望透過多元型態的呈現，吸引世界各國對於該議題之重視，同時也宣傳我國近幾年重要成就，由王英偉署長開場，

簡介我國近幾年來國家對於慢性病預防及管理投入的情形及目前相關成果，進行以健康推動外交之演說。

議程

Time	Topic	Speaker
12:30-12:48 (18 min)	Statuses and progress on NCD – Global Perspective	**Fiona Adshead, Ph.D.,** Deputy CEO and Director of Strategy and Partnerships, NCD Alliance
12:48-13:06 (18 min)	Status and progress on NCD – Asia's Perspective	**Wayne Huey-Herng Sheu M.D., M.S., Ph.D**. Immediate Present Chair, International Diabetes Federation Western Pacific Region (IDF WPR)
13:06-13:24 (18 min)	Status and progress on NCD – Taiwan's Perspective	**Prof. Hsiu-Hsi Chen** Professor, Institute of Epidemiology and Preventive Medicine, College of Public Health, National Taiwan University, Taipei, Taiwan
13:24-13:42 (18 min)	Chronic Disease Management with Big Data	**Shah Nilay, Ph.D.,** Chair, Division of Health Care Policy & Research, Department of Health Sciences Research, Mayo Clinic, U.S.A.
13:42-14:00 (18 min)	Experience on ICT Approach in Disease and Health Management	**Maria Teresa Arredondo Waldmeyer, PhD** Director of LifeSTech, Director of Vodafone Chair at Universidad Politécnica de Madrid(UPM), Spain

台灣學者代表演說

台中榮民總醫院許惠恒院長：

首先，會議邀請許惠恒院長代表我國談論目前糖尿病衝擊及其防治重要性，許院長目前擔任國際糖尿病聯合會主席，於台灣許多縣市辦理過國際糖尿病大會，因此在糖尿病議題具相當之國際知名度，因此這次擔任慢性病防治大使講述目前亞洲糖尿病流行病學及其現況，並從其多項病因探討國家防治策略，並呼籲各國重視該議

題對於族群健康之影響。許院長呼籲各國應該了解疾病衝擊程度、目前防治資源盤點、適切性策略之擬訂等國家動員模式以有效降低糖尿病之衝擊。除此之外，許院長也提到醫院是糖尿病防治不可或缺的角色，除了醫療以外，應該積極投入社區及病人衛生教育及照護，推動以健康促進醫院為目標，以醫院軟體及硬體多角色經營模式之醫院帶動預防醫學之概念，降低慢性病之衝擊。許院長也於演說中以台中榮民總醫院為例，提供成為健康促進醫院之作法及成果分享。

台大公共衛生學院副院長陳秀熙教授：

根據 WHO 對於慢性病防治之建議，主要包括六大面項：健康服務之傳送、資訊系統建置、醫療產品、疫苗及科技之開發、健康經濟及領導角色及管理等，透過上述這些元素以降低 25%因慢性病所導致的早死亡(premature mortality)影響。我國衛生福利部國民健康署於國家癌症篩檢之執行徹底結合這六大面項而成功完成初步相當不錯的結果，因此邀請陳秀熙教授進行該部分演講，並探討如何利用該基礎推動台灣慢性病防治之藍圖及其執行模式。

我國於 1995 年開辦全民健康保險，其中預防保健政策提供 40 歲以上之族群成人及老人健康檢查服務，結合癌症及慢性病篩檢共同平台，也因此了解癌症與慢性病之間存在共同危險因子，例如肥胖、抽菸、嚼檳榔等，台灣諸多縣市因此推動整合式篩檢平台，深入社區提供健康篩檢服務，因而建立我國完整慢性病及健康行為之重要大型資料庫，進一步利用大數據模式探討我國族群高、中、低危險分群後，將此方式應用於社區，針對不一樣危險分群給予公共衛生多階段不同的介入模式，包括初段衛生教育介入、次段不同篩檢間隔或工具之應用，以提高對於族群式健康照護之效率，因此以

台灣目前發展之模式提供給其他國家作為參考。

國外邀請學者演講及對談

國際 NCD 聯盟(NCD Alliance)副主席 Dr. Fiona Adshead：

會議邀請國際 Dr. Fiona Adshead 針對目前慢性病防治進行國際觀簡介，包括過去國際聯盟所做的努力及未來與 WHO 目標結合之策略發展。國際 NCD 聯盟是慢性病防治最大也是唯一國際大型 NGO 組織，與國際癌症防治組織(International Cancer Control, UICC)及國際糖尿病聯合會(International Diabetes Federation, IDF)、世界心臟聯合會(World Heart Federation, WHF)緊密結合外，也與多個國際團體共同針對慢性病防治進行國際間之合作及連結，其所屬的國際 NCD 聯盟呼籲 NCD 重要性、透過相互監控機制及會議喚起每個國家對於慢性病防治之責任，進而彼此進行慢性病防治知識之交換，以提高世界對於慢性病防治之知識普及行動力。

2018 年 NCD Alliance 將召開聯合國慢性病高峰會議，呼籲世界各地及區域聯盟國家對於 NCD 的重視並提撥較高的經費及資源投注於 NCD 防治上，且積極與世界衛生組織所強調的 Sustainable Development Goals (SDGs)目標為推動準則，結合當地相關重要傳染病防治，增加共同監控及改善，邁向永續經營概念完成疾病防治，提升全球人口健康及生活品質。

梅約診所衛生政策中心研究員 Dr. Nilay Shah：

邀請 Dr. Nilay Shah 針對目前 Mayo Clinic 之大數據應用於慢性病疾病管理之開發進行分享，Dr. Nilay Shah 目前是美國 Mayo Clinic 衛生政策中心研究員，主要利用 Mayo Clinic 所建立之大數據進行多方面應用性探討，透過會員及就診病患之資料連結進行多方面應用，

除了傳統長期追蹤世代研究外，大數據中心將個人生活習慣、日常活動狀態、就醫及服用藥物頻率、後續就醫頻率及預後等等，透過統計分析製成視覺化(Visualization)呈現方式，讓非專業者也容易分辨何者是高危險群或低危險群，進而轉化為 Mayo Clinic 個人化管理應用，根據每一位顧客所需提供專業化健康管理模式，以增加民眾滿意度及醫囑遵從性，提高健康管理成效。

Universidad Politécnica de Madrid 大學 Maria Teresa Arredondo 教授：

最後邀請 Prof. Maria Teresa Arredondo 教授分享目前科技環境輔助慢性病健康管理之實際應用狀況，Prof. Maria Teresa Arredondo 主要是資訊及通訊類背景出身，長期投注於健康照護結合通訊科技類之應用，因此在西班牙 LifeSTech 研究室建立實體物聯網架構並形成一個實體參訪中心，該中心結合學校學術單位、城市設施、通訊及交通、居家環境、大數據中心等為一體，展現物聯網健康照護架構及執行方式。Prof. Maria Teresa Arredondo 其研究領域包含個人化健康照護、健康活躍老化、健康照護設施研究、打造智慧城市及健康物聯網，以創造未來更加健康、活躍的生活。

在此次演講過程中，教授呈現科技化應用於巴金森氏症病患之照顧，包括家庭、社區環境及其日常生活起居、生理功能監測等等如何與通訊及資訊應用連結。除此之外，她也提供職能復健輔具之應用、透過穿戴式之生理及行為表現預測心理及情緒欲呈現之研究、穿戴式及臥躺床被對於生理監測之應用、老人失智症之輔具介入延緩心智功能等，皆呈現現代科技之廣泛應用而不再僅是夢想境界，是一個相當值得參訪的單位。

備註-講者摘要

1. **Dr Fiona Adshead**, Deputy CEO and Director of Strategy and Partnerships, NCD Alliance

   講題：Status and Progress on NCDs – A Global Perspective

   NCD Alliance: Making NCD Prevention and Control A Priority Everywhere

   摘要：

   This talk will give a global overview of why NCDs are such an important global health priority, outline NCDA's work on this to promote their prevention and control, demonstrating why 2018 is such an important year for global advocacy and how information technology can play a critical and innovative role.

2. **Shah Nilay**, Ph.D., Chair, Division of Health Care Policy & Research, Department of Health Sciences Research, Mayo Clinic, U.S.A.

   講題：Chronic Disease Management with Big Data

   摘要：

   In this presentation, I will review the role of big data in improving outcomes for patients with chronic conditions. I will discuss the impact of traditional data use for reporting and benchmarking care, use of novel analytics to identify opportunities to improve the targeted delivery of care for patients with chronic conditions, and the role of digital technologies to improve real-time management of chronic conditions. Reporting of outcomes for chronic diseases is becoming increasingly common, however there is wide variation in how this is incorporated into care delivery settings. This population level measurements can provide assessments of care delivery at the practice

or regions. Use of novel analytics can be used to identify patients who may benefit from specific interventions and may enable more efficient use of resources while optimizing health outcomes. Finally, digital technologies have the potential to both empower patients with chronic conditions while creating an approach to providing real-time support for enhancing health outcomes. This presentation will cover the current uses of big data to manage chronic diseases as well as new and evolving technologies that have the potential of changing the way we care for patients with chronic diseases.

3. **許惠恒院長**

講題：Status and progress on NCDs – Asian Perspective

摘要：

Non-communicable diseases (NCDs) lead to substantial mortality and morbidity worldwide. The four most common NCDs are cardiovascular diseases (CVD), diabetes, cancer and chronic respiratory diseases. The World Health Assembly endorsed the WHO 9 Global Action Plans for the prevention and control of NCDs 2013-2020. These Action Plans provide a road map and global target for countries, including Asia. With the rapid increase in NCD-related deaths in Asia countries, NCDs are now the major causes of deaths and disease burden in this region. According to WHO reports, across the region, NCDs cause 62% of all death, killing around 8.5 million people every year. A total of 48% of persons that die from NCDs do so prematurely. For example, according to the survey of the International Diabetes Federation (IDF), the prevalence of diabetes in the Western Pacific Region was 9.5%. To halt the rise in diabetes and obesity, various action plans and epidemiology study for prevent or delay the

onset of diabetes were lunched by IDF Western Pacific Region. It is urgently required that multisectoral collaboration be implemented to increased awareness on prevention and control of NCDs. The experience of health promotion to improve the quality of health care for satisfaction of patients, relatives, and staff by Taichung Veterans General Hospital at central Taiwan will be presented.

4. 台大陳秀熙教授

講題：Status and Progress on Non-communicable Disease (NCD): Taiwan's Perspective

摘要：

Multi-level prevention of NCD

Prevention of non-communicable disease (NCD) is often involved with multi-dimensional aspects (including multifarious etiologies, multi-state process, and multiple outcomes, multi-level organization (from individual, family, institution, community, and environment)). How to integrate different and multi-level preventive strategies as a unifying and systematic framework pursuant to the principle of surveillance and population-based prevention cannot be overemphasized if the goal of WHO, "25% mortality reduction form NCD by the end 2025" is to be achieved.

Over the past two decades, Taiwan health authority, particularly Health Promotion Administration, one of sections under Ministry of Health and Welfare, together with health professionals, and non-profit organization has been devoted to developing this goal through different strategies at different levels after a series of systematic epidemiological surveys and studies for need assessment between 1970 and 1990. At nationwide level, health policies on primary prevention (such as

smoking cessation and weight reduction), secondary prevention (such as screening for cancers of cervix, breast, colon & rectum, and oral cavity cervical), and tertiary prevention (universal insurance health care) of NCD have been advocated and carried out under various Acts mandated since early 1990s.

At institution level, the vertical integration of health care delivery in relation to NCD has been made by systematically streamlining primary care that is responsible for adult check-up and basic preventive services into medical centre with main emphasis on tertiary prevention of offering medical care for patients such as targeted therapy for cancer and health care for chronic disease (such as diabetes care). Such in-reach health preventive services have been delivered to each resident and have also been covered by national health insurance since 1995.

At community level, community-based integrated screening and intervention programs on the basis of family unit, albeit invitation is still done by individual level, have been conducted since 1999 to deliver a series of outreaching health preventive services (including five common cancers and three chronic diseases) to offset the corresponding in-reach preventive services indicated above in order to reach the principle of equity, efficiency, and participation.

Integrated preventive service for NCD

Since we have multi-level prevention programs for NCD, assessing the benefit of such integrated preventive services is worthy of being investigated. Here, we first show an example of how community-based integrated screening and intervention program in relation NCD produce the overall benefit of offering such an integrated preventive services embracing primary, secondary, and tertiary prevention. We then propose one example of integrated preventive services for

preventing colorectal cancer, cardiovascular and cerebrovascular disease. Economic evaluation of the prevention of gastric cancer by using chemoprevention, screening, and tertiary prevention is also presented here.

Hierarchical Informatics on NCD prevention

Multi-level dimensions in the prevention of NCD as indicated above offer an opportunity to develop a systematic and integrated information system from medical informatics for health professionals to cyberinformatics for clients by building up big data system on primary data and secondary data. The former consists of population-based data accrued from community-based integrated screening and health promotion on demographics, risk factors and social behavior determinants related to NCD and patients-centred data on health care delivery accrued from national health insurance. The latter consists of population-registry-based data such as mass screening registry, cancer registry, and mortality registry.

Personalized public health services for prevention of NCD

Based on big data information system, personalized risk assessment models were developed according to various diseases to elucidate the roles of effects of one detrimental or protective factor on multiple outcomes and state-specific roles of multifarious factors (including genetic determinants, environmental factors, and psychosocial behavior factors on multi-state outcomes, leading to recurrence and death. Such a systematic and multi-state risk assessment model for each disease can be integrated as a whole to develop a personalized public health integrated service for prevention of a series of NCD rather than only for one single NCD embracing primary, secondary,

and tertiary prevention. We show how such a personalized risk assessment model is applied to develop personalized screening policy for breast cancer screening and also preventive services for other chronic diseases.

Challenges for prevention of NCD

There are several challenges for prevention of NCD in in Taiwan and also in the globe. Benefits and harms of preventive services for NCD have been often debatable. For example, overdiagnosis of mammography and unnecessary treatment for pre-diabetes who may have been self-resolved had screening not been offered to them are two classical examples. Solutions to such challenges may rely on the development of personalized public health services, the better use of information through m-health, and the development of shared decision making for individual's activation and empowerment.

肆、 心得及建議

一、本署自 2016 年在駐日內瓦處施金水副處長引薦下，第一次參與會議，包括參與演講及辦理一場午餐會議。今年第二次與會申辦平行論壇，主題為「Information technology as an innovative approach to address Non-Communicable Disease」，由署長及日內瓦大學 Bettina 教授擔任主持人，邀請國內二位專家及國外三位專家提供演講，包括：台大陳秀熙教授(亞洲篩檢學會主席)、

台中榮總許惠恒院長(亞太糖尿病協會前主席、台灣糖尿病學會理事長)、NCD Alliance 副執行長 Fiona 教授、美國梅約醫學中心政策執行及研究中心主任 Nilay 教授及西班亞馬德里大學 Teresa 教授擔任講座。約計 80 人以上(會議室最大人數為 70 人)參與會議。從全球應用 ICT 對 NCD 的投入到亞洲、歐洲及美國發展現況，從學術到醫療實務進行熱烈討論。

二、另外，大會為鼓勵年輕學者積極投入，會議過程中也有現場海報展出。台灣來自台大、北醫及長庚大學公衛團隊及國衛院張新儀研究員以台灣大型資料庫發展與心血管疾病風險評估，獲大會接受參加海報展出，這也是台灣第一次投稿並獲大會接受。

三、除了參與會議，另也安排二場雙邊會議，包括與三位國外講座溝通未來合作方向，台中榮總許院長向 NCD Alliance 表達台灣參與國際組織之意願並分享台灣糖尿病防治成果，NCD Alliance 副執行長表示會協助台灣糖尿病學會參與其組織。台大陳秀熙教授分享台灣大型資料庫處理分析對 NCD 防治經驗，日內瓦 Bettnia 教授邀請教授後續彼此合作。王署長亦邀請梅約醫學中心 Nilay、Fiona、Bettina 三位教授今年 10 月到台灣參加 GHF，並舉辦相關工作坊，三位國外教授對台灣之積極參與與

邀約皆表示歡迎。4 月 12 日晚上由駐瓦處陳大使宴請 UICC 主席及會議執行長、王署長及陳秀熙教授，會中也對台灣參與 UICC 組織及今年國際會議，表達本署立場與未來合作意願。

四、為使台灣對國際醫療、公衛之具體貢獻能讓 WHO 了解，賈淑麗組長於會場向 WHO 助理幹事長 Yakomoto 女士表達台灣國際醫療、學術發展之積極投入具體，希望藉由此次會面加深其對台灣之認識，另與 WHS(World Health Summit)主席 Dr.Detlev Ganten 會晤，台灣現有台灣大學參與 WHS 組織，Ganten 教授對台灣印象良好且深刻。

五、駐瓦處陳錦龍處長對本署此次參與會議表達感謝，認為對實質外交有助益，並在 WHA 會議前讓日內瓦及歐洲國家更對台灣留下專業學術之印象。

六、本次由國民健康署主辦之午間論壇，會議現場提供手冊供聽眾可作進一步閱讀，現場聽眾參加踴躍，包括多國學者及學生參與，也針對我國的相關議題提出問題及討論，國際交流相當成功。午間論壇確實可以提供交流平台，但時間比較短促，未來可以增加特別展覽區結合海報方式呈現台灣社會、人文及健康之特色，看見台灣之美。

特別致謝人員

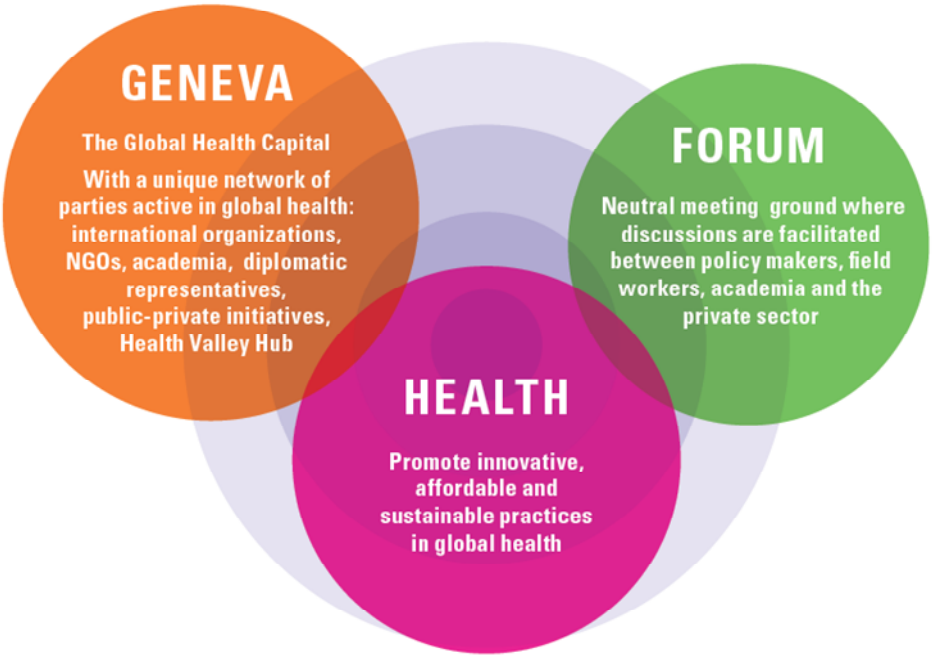
本次出國參加第 7 屆日內瓦健康論壇成果豐碩，並與 NCD Alliance 及 UICC 兩個重要的慢性病防治 NGO 進行會談，就我國與與雙方在非傳染性疾病預防與控制議題之合作上跨出重要的里程碑。特別誠摯感謝外交部駐瑞士日內瓦辦事處陳錦龍處長及施金水副處長，費心協助安排協調事宜，及展現地主之誼與陪同與會，且盛情款待並熱心協助處理本團於日內瓦當地之多項問題。

本次行程承蒙襄助，受益良多，謹一併致上謝忱。

附錄一：大會介紹

About GHF

The GHF is the forum of innovative practices in global health with the ambition becoming an absolute must where health issues, fed by field experiences, are challenged. Beyond this thread, each edition continues to develop a specific topic that stimulates interest and broadens the audience for the GHF.



The Geneva Health Forum (GHF), created in 2006 by the University Hospitals of Geneva and the Faculty of Medicine of the University of Geneva, is the Swiss flagship event in relation to global health. Every two years, GHF attracts both Swiss and internationally renowned stakeholders, and brings together participants from all sectors (health, academia, politics, civil society and private sector professionals).

The Forum of Innovative Practices in Global Health

Geneva Health Forum 2018

The Geneva Health Forum (GHF), a biennial event launched in 2006 and held in the Spring, combines plenary and parallel sessions attended by hundreds of participants, with a large international exhibition area.

Geneva University Hospitals (HUG) along with the Faculty of Medicine of the University of Geneva, and Swiss and International organizations committed to Global Health have joined their talents and resources to organize the Geneva Health Forum.

The GHF was established to link policy and practice, and addresses health issues through an integrative approach. It is known as the largest event in Europe gathering such a distinguished audience, composed of academic leaders, practitioners, policy makers, diplomats, representatives of donor agencies and healthcare providers.

Keynotes lectures and plenary sessions are given by international health leaders, and series of workshops, oral and poster sessions are held. These foster and nurture stimulating discussions on major global health issues. All plenary sessions as well as a track of parallel sessions are simultaneously translated in French and English. The GHF also provides a platform for showcasing the international and humanitarian, practice and solution-oriented commitment of the participants, and gives a voice to those active in the frontlines of global health.

Geneva provides a unique opportunity to the leading global health organizations to meet with governmental delegations appointed by most countries through their permanent UN representations. Indeed, Geneva hosts major international organizations in charge of health and humanitarian action, influential foundations, NGOs and public-private partnership organizations in the field of global health.

The Lake Geneva area, often described as the “Health Valley”, presents a unique concentration of healthcare and academic institutions, and is blooming with many innovative biotech, medtech, and engineering start-ups as well as larger companies in the health sector.

The seventh edition of GHF, will take place from April 10-12, 2018 at the International Conference Center of Geneva (CICG).

2018 Theme: Precision Global Health in the Digital Age

The Geneva Health Forum was created in 2006 by the Geneva University Hospitals and the Faculty of Medicine of the University of Geneva. Every two years, the GHF attracts both Swiss and internationally renowned stakeholders, and bring together participants from all sectors (health, academia, politics, civil society and private sector professionals). The GHF is organized in partnership with the key actors of global health present in Geneva and under the patronage of International Geneva

The Geneva Health Forum is the forum of innovative practices in global health with the aim to showcase innovative, accessible and sustainable practices in order to facilitate access and health equity. The GHF promotes dynamic networking and partnership among various parties active in global health.

The complexity of global health practices requires an integrated and nulti sectoral approach; the GHF fosters inclusive partnerships among various parties active in global health, among them: Geneva University Hospitals, University of Geneva, World Health Organization, Médecins Sans Frontières, Swiss TPH, DNDI, FIND, Swiss Academy of Medical Science, Cité de la Solidarité Internationale, International Hospital Federation, Swiss Agency for Development and Cooperation, Haute Ecole de Santé de Genève, International Committee of the Red Cross, International Federation of Pharmaceutical Manufactures and Associations, Graduate Institute of International and Development Studies, Ecole Polytechnique Fédérale de Lausanne.

For the 2018 edition to be held from 10 to 12 April 2018, the GHF will explore the impact of the digital revolution in the health practices. The GHF will address emerging global health issues such as future pandemics and health security, antimicrobial resistance, non-communicable diseases, access and affordability to essential medicine and health equality, chronic diseases, universal health coverage,

neglected tropical diseases, essential diagnostics with a special focus on health initiatives from Central Asian countries, by inviting the Russian Federation as guest of honor, and the Republic of Tajikistan and the Kyrgyz Republic as special guests of the GHF 2018.

The Global Health Lab: This year again the GHF will set up an interactive and dynamic hub where participants will be able to try out new technologies and products, it's a way to present collectively innovation in the same field and to create meaningful connections that could lead to new ideas, new opportunities and partnerships.

附錄二：大會議程

PRECISION GLOBAL HEALTH IN THE DIGITAL AGE
PROGRAM

GENEVA HEALTH FORUM
7TH EDITION
APRIL 10-12 2018

Tuesday 10 April

Plenary | Parallel | Experience Sharing | Workshops | Invited Sessions | Exhibition

	Track 1 Health system	Track 2 Health care	Track 3 Health actors	Track 4 Research and development	Track 5 Communication	Hosted meeting
08:00	Registration					
09:00	Plenary 1 - Quality of health systems – the missing piece between better access and improved health (Co-hosted by SDC)					
10:30	Coffee break, Visit exhibition, Poster					
11:00	PS1-1 Etraining and medical education, an leverage to restructure the health system	PS1-2 Ophtalmology: New tools to fight a neglected world health problem	PS1-3 Citizen science, open science, Fab lab, Do it yourself… the new ways of innovation	PS1-4 Adding digital power to research ethics review	PS1-5 Ehealth: time for pilot is over	
12:30	Lunch break			LS01 Novartis Foundation	LS02 Merck	
14:00	Plenary 2 - Access to health: Put the patient at the heart of our concerns					
15:30	Coffee break, Visit exhibition, Poster					
16:00	PS2-1 New digital tools at the service of healthcare financing and UHC	PS2-2 Are Neglected Tropical Diseases Affected by Ehealth?	PS2-3 Patient partner at the age of the Ehealth	PS2-4 Big Data, artificial intelligence, blockchain, modelisation: examples and question for health	PS2-5 Science Flash Talk organised by SSPH+	
17:30	Coffee break, Visit exhibition, Poster					
17:45	Opening Ceremony (Co-hosted by SDC) 17:45 70th anniversary of WHO - Historical note – 18:00 Welcome messages – 18:30 Keynote addresses					
19:15	CHF cocktail					

Wednesday 11 April

Plenary | Parallel | Experience Sharing | Workshops | Invited Sessions | Exhibition

	Track 1 Health system	Track 2 Health care	Track 3 Health actors	Track 4 Research and development	Track 5 Communication			Hosted meeting
08:00	ES1-1 Maintenance of the digital device	ES1-2 Respiratory monitor	ES1-3 International Geneva welcomes health organizations	ES1-4 Writing a medical guideline: could we be better and quicker	ES1-5 Serious game, virtual reality, simulation: sharing experience	ES1-6 How can use drone in the health and humanitarian sector?	ES1-7 British Medical Journal Clinical Decision Support Initiative	
08:15	Artificial intelligence for Global Health							
09:00	Plenary 3 - Cybersecurity and the health system: What risks for patients? (Co-hosted by the World Health Summit/M8 Alliance)							
10:30	Coffee break, Visit exhibition, Poster							
11:00	WS01 Diabetes and E-Health solutions in resource-limited settings: gadgets or real opportunities for quality care?	WS02 What digital tools to develop chronic wound care in resource-limited countries?	WS03 Define the specifications to carry out a diagnostic tool to diagnose the main gynecological pathologies in one day at an affordable price in a district hospital in Africa.	WS04 Noma, A Rare Tropical Disease in the Digital Age - Old Difficulties, New Tools?	WS05 Making periodic protection accessible in resource-limited settings: a public health challenge	WS06 Learn how to use big data: What challenges, what tools?	WS07 Mental health: Do digital tools have an interest?	WS08 Feltcher and health worker: Is digital changing their job?	WS09 Cyberattack and hospital: what are the issues?	WS10 Digital health and integration. About the example of HIV	WS11 Health promotion in digital times.	
12:30	Lunch break					LS03 Taiwan		LS04 TBC				
14:00	Plenary 4 - Digital: What place will remain for the health professions? (Co-hosted by MSF)											14:00-18:00 Internships and job dating* with MSc Global Health (MScGH) students
15:30	Coffee break, Visit exhibition, Poster											
16:00	PS3-1 Global health security – Towards multisectoral collaborations to confront the	PS3-2 Technology for maternal, newborn and child health: Can we rely on it for the future?	PS3-3 Partnership in research	PS3-4 Mapping: Better visualization for better action	PS3-5 Serious game, virtual reality, simulation: disruptive tools for training, sensitization and care							

Thursday 12 April

Plenary | Parallel | Experience Sharing | Workshops | Invited Sessions | Exhibition

	Track 1 Health system	Track 2 Health care	Track 3 Health actors	Track 4 Research and development	Track 5 Communication		Hosted meeting
08:00	ES2-1 What trainings for ultra-sound exam	ES2-2 North South cooperation for hospitals: which model works?	ES2-3 Palliative care for Cancer patients in LMIC	ES2-4 Electronic scientific library… what solutions for documen-tation in remote area?	ES2-5 The benefits of the IMCI digitalization	ES2-6 Ageing, longevity and technology: quantity or quality?	
08:15	Blockchain for Global Health						
09:00	Plenary 5 – Emerging infectious diseases crisis (Co hosted by Swiss TPH and Geneva Center for Emerging Viral Diseases)						
10:30	Coffee break, Visit exhibition, Poster						
11:00	PS4-1 Building interoperable and cost effective ICT systems fo health in low and middle income setting	PS4-2 Cancer in LMIC : time for action	PS4-3 Promote family medicine to strengthen the health care system	PS4-4 Does digital revolution access to knowledge ?	PS4-5 Space science and technolo-gies to advance health-related sustainable development goals		
12:30	Lunch break			LS05 IFPMA	LS06 Reserved		
14:00	PS5-1 Moving through the dimensions: How to include vertical initiatives into efforts to achieve Uni-versal Health Coverage?	PS5-2 Innover en intégrant les soins maladies infec-tieuses et chroniques en Afrique	PS5-3 Humanitarian action in the field – challenges and opportunities of a global workforce	PS5-4 What research network to deal with outbreaks of emerging pathogens?	PS5-5 Are we ready for the next emerging pandemic: Opportunity and chal-lenges in the digital age	PS5-6 Telemedicine to fight against medical deserts	
15:30	Coffee break, Visit exhibition, Poster						
16:00-17:30	Closing Ceremony, Award Room 2 (Co-hosted by ICRC) 16:00 Awards ceremony – 16:10 Conference announcement – 16:15 Influenza 1918 anniversary - historical note – 16:30 Keynote addresses – 17:15 Closing remarks						

During the GHF 2018 we will be hosting two photo exhibitions :
« Ma santé, mon histoire » de Sophie Inglin
« Les visages de la pauvreté » de Mylène Zizzo

Post conference
Friday 13th April - Campus Biotech: Expert meeting on economics of PM organized by the EPFL

附錄三：相關照片

大會開幕

大會開幕

午間論壇

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