行政院及所屬各機關出國報告
（出國類別：開會）

APEC 衛生體系創新政策對話

Health Systems Innovation Policy Dialogue

出國報告

主辦機關：行政院衛生署國民健康局
出國人員：衛生署國民健康局
邱淑媞 局長
劉家秀 研究員
出國地區：美國舊金山
出國期間：100 年 9 月 15-19 日
報告日期：100 年 12 月

摘 要

為積極參與國際場域，讓我國健康促進及非傳染性疾病之具體作為藉由 APEC 之平台與國際分享，行政院衛生署署長邱文達應美國衛生部賽白琳部長邀請，率領本局局長邱淑媞暨本署同仁參加本（100）年 9 月 16-17 日假美國舊金山舉辦之「APEC 衛生體系創新政策對話(APEC Health System Innovation Policy Dialogue)」會議，會中各會員體針對非傳染性疾病白皮書與健康創新投資等議題的內容進行分享與討論，另署長及邱局長皆受邀發表我國慢性病防治經驗，並以癌症防治為例分享台灣政府與民間組織、醫療院所等多年來合作努力成果。

16 日會議首先由美國衛生部長賽白琳(Kathleen Sebelius)開幕並發表演說，接著我國邱署長與美國衛生部長、馬來西亞衛生部長 Liow Tiong Lai、汶萊衛生部長 Pehin Dato Adanan Yusof、菲律賓衛生部長 Enrique Ona 及泰國生命科學部長 Suwit Khunkitti 等 6 位部長共同參加旨揭會議開幕式及「因應 APEC 區域非傳染性疾病之挑戰」主題發表演講。署長報告我國目前 4 大慢性疾病(心血管疾病、糖尿病、癌症和慢性肺疾病)和其共同危險因子(吸菸、過量飲酒、不健康飲食、運動量不足等)之現況與國際比較；並指出為打擊慢性病，政府積極推動三高防治(血壓、血糖、血脂肪)、菸害與檳榔防制、減重與推廣運動等成果，並以「癌症防治」為例，說明我國在癌症預防、篩檢、診療與癌症登記監測與評估等推動經驗，獲得與會者一致好評。

17 日的會議則集合來自的產業、官方與學術界的專家們，依研究、偵測、預防和治療非傳染性疾病分成四組進行分組的平行會議，本局局長邱淑媞亦於分組 Group C：Detecting Diseases 分享我國如何以實證為基礎推展整合性四癌篩檢以及提出心血管疾病、糖尿病等慢性病有效篩檢及後續治療及介入措施之經驗，與會者討論熱烈。隨後在大會中針對各組提出的具體建議進行討論，凝聚成一個期能強化健

康體系並減少非傳染性疾病經濟負擔的行動方案作為本次會議的成果。

最後，在過程中本局與各國官產學界頻繁互動和交流，也向各國代表表達無法參與後續聯合國於9月19-20日召開之慢性病防治高峰會議之遺憾。

目　次

壹、目的

藉由參加 APEC 衛生體系創新政策對話，與會員國分享並宣揚我國推動慢性病防治之政策、執行策略與成果，並與各國推動慢性病防治參加單位及代表交流， 建立未來合作基礎。

貳、過　程

- **100 年 9 月 15-19 日行程表**

	9 月 15 日
時間	行程內容
23:10	搭乘中華航空 CI4 由桃園機場離境。
17:50	搭乘中華航空 CI4 抵達舊金山(SFO)。
晚上	媒體機場採訪： 1. 中央社、當地世界日報、星島日報、KTSF26 電視台（有攝影機）等媒體。 2. 世界日報記者陳運璞盼專訪（問題及擬答稿如附件）
住宿地點：9 月 15 日至 18 日 The Westin St. Francis, 355 Powell St. San Francisco, CA 94102。 Tel: 415-397-7000；Fax: 415-774-0124。	
	9 月 16 日
時間	行程內容
10:30-11:00	馬來西亞衛生部長 Liow Tiong Lai 雙邊會談 地點：The Westin St. Francis
12:00	大會午宴(Speaker's Luncheon)：

	地點：Farallon Restaurant, 450 Post Street
14:00-18:00	**Health System Innovation Policy Dialogue** The Westin St. Francis： 署長演講: Addressing NCD Challenges in the APEC Region-Cancer Prevention and Control in Chinese Taipei
18:30-21:00	Gala Dinner(Alexandra's)
	9 月 17 日
時間	行程內容
8:00-8:30	中央社、當地世界日報、星島日報、KTSF26 電視台等多家媒體記者聯訪。
9:00-9:30	Health System Innovation Policy Dialogue Welcome & Day Two Opening Keynote
9:30-11:00	Session Three: Supporting Innovation Across the Healthcare Ecosystem Group C: 邱局長演講「Achieving the target of the expanded cancer screening program in Chinese Taipei: Transforming healthcare , saving more lives」
12:15	Working Luncheon
14:00	Conclusion
	9 月 18 日
時間	行程內容
01:05	團員搭乘中華航空 CI3 由舊金山(SFO)返國。
05:30	團員搭乘中華航空 CI3，9 月 19 日（一）抵達台北(TPE)。

參、會議重點

一、會議目的

根據世界衛生組織今年最新發表之 Global Status report on noncommunicable diseases 2010，統計數據顯示非傳染性疾病(NCD)已占全球疾病死亡的 63%，全球應正視 NCD 造成之衝擊，包括造成減少健康餘命、失能以及進而減少國家經濟生產力等，預防為全球因應非傳染性疾病的首要任務，減少危險因子(吸菸、酒精濫用、不健康飲食及缺乏運動)是重要的策略。NCD 防治主要包括四大疾病(心血管疾病、癌症、慢性呼吸道疾病、糖尿病)，另外精神及神經障礙(如阿茲海默症)、腎臟病/口腔疾病/眼疾亦與 NCD 有關，對許多國家亦造成沉重的負擔，亞太地區亦不例外。本次會議即針對非傳染性疾病之預防與健康創新投資等議題經由 APEC 平台與各會員體進行分享與討論。

另 APEC 為呼應聯合國於 9 月 19-20 於紐約召開的慢性病防治高階會議（UN High Level Meeting for NCD Prevention and Control），亦將 APEC 近年各經濟體對慢性病防治的成果以及其政府高階領導對未來防治行動計畫之承諾於本會議後提報至 UN 會議，以做為 APEC 對 UN 之貢獻。

二、會議開幕

首先由美國衛生部長賽白琳(Kathleen Sebelius)開幕並發表演說，賽白琳部長強調慢性病是造成全球經濟安全之重大威脅，也說明美國每十人死亡中，七人即是由慢性疾病造成，並預估 2030 在亞太地區將有 5 千 2 百萬人將死於慢性疾病。她亦分享美國的因應政策與防治措施，並闡述美國曾就 SARS、H1N1 等傳染性疾病與各國共同

攜手合作，成效斐然。未來盼與 APEC 會員體就非傳染性疾病議題再次合作，並呼籲經濟體應共同努力、積極採取行動方案，包括持續創新、強化政府各部會整合合作以及公私部門之夥伴關係以預防慢性疾病之危害，減少醫療照護支出。

三、Session One: **Addressing NCD Challenges in the APEC Region**

該場由經濟學人雜誌亞太總編輯 Charles Goddard 擔任主持人，我國邱署長、汶萊衛生署長及香港衛生局長共同就該議題分享個別經驗並進行對話。邱署長以我國癌症防制經驗為例進行演說(簡報如附件三)，提出台灣癌症防治成效的事蹟摘要如下：

台灣過去有令人驕傲的國際表現，例如我們在 1984 年全面推動 B 型肝炎疫苗接種，這是全世界第一個可成功預防癌症的疫苗，這項措施讓台灣 6 歲孩童感染 B 型肝炎的機率大為降低，從 1989 年的 10.5%降至 0.8%（2007 年）。此外，台灣亦非常努力推行子宮頸抹片檢查，經過多年努力，篩檢率大幅提升，促使子宮頸癌死亡率降了 2/3。

但根據統計，目前台灣民眾健康最大殺手仍是癌症，至２００７ 年為止，台灣癌症死亡率已占所有死亡人數的 28.1%，另 2009 年統計發現癌症的醫療花費占所有醫療支出的 10.1%。這項警訊即提醒我們要更努力推展癌症預防。總體來說，造成癌症最常見的危險因子的就是不運動，介於中間值的則是肥胖與抽菸，此外，我們較獨特的危險因子是檳榔。這些年來，我們已全力進行治療，讓國人健康得到保障。未來我們採取 3 個重要策略：癌症篩檢、有品質的癌症照護以及癌症預防(尤其是減重與多運動)來全面性防治癌症。目前我們有 41 家醫院提供國家級的癌症診療品質，8 家卓越研究中心，也已經立了 3 個法，分別是癌症防治法、菸害防制法以及最近剛通過的運動產業發展條例。眼前還有 3 個法要努力推，分別是國民營養法、酒精防制法與

檳榔防制法。抽菸對健康的危害眾所周知，自從菸害防制法通過之後，成效已經逐步展現，民眾滿意度高達92%。現在我們也正推動二代戒菸，包括門診、住院與社區衛教，都由政府給付，希望能協助更多人成功戒菸。至於體重控制，也是我們的重點工作，今年國健局舉辦全民減重600噸活動，在全國各地如火如荼展開，活動實施不到半年，截至今年9月16日，已經減掉657公噸了，共有54萬5千人參與，算是很成功的活動。在篩檢方面，愈來愈多醫院利用IT加強癌症篩檢，成效顯著，例如醫院資訊系統具自動提醒功能和各類檢查主動提示系統，能協助找出需要進行篩檢的人，以及適合進行哪些檢查項目，也方便醫院進行後續追蹤。這幾年，我們也積極推動乳房攝影、糞便潛血、口腔黏膜、子宮頸抹片檢查等四大癌篩，讓篩檢率不斷提升，尤其乳房超音波攝影檢查，篩檢率成長非常快，從個位數進步到將近27%。日後，我們仍要持續推動篩檢，提高篩檢率，我希望能將篩檢率增加至1.5倍。去年，我們做了400多萬筆癌症篩檢發現一萬多例的癌症，這對減少癌症威脅很有幫助，這項成果在國際上也頗為亮眼。

我們的目標是， 到2021年，癌症比2009年減少兩成，抽菸率減少一半，嚼檳榔的比率也要下降50%，更重要的還有，規律運動的比率也要倍增，至於符合正常BMI的部分，我們希望能提高5~10%，這不太容易，但這對國人健康具有實質上的幫助，所以不論多艱難，還是要繼續努力，為民眾健康把關。

邱署長之演說獲得各經濟體代表及公私部門近百位參加者之熱烈回應，中場休息時，並與其他衛生部長充分交流，展現我國衛生醫療之成就，並有效提升國際能見度。

四、Session Two: Health Investment and the Economic Burden of Diseases

該場由澳洲 Dr. Peter Sheehan, Director, Centre for Strategic Economic Studies, Victoria University and Academic Co-Chair of the LSIF 主持，並邀請馬來西亞衛生部長、Johnson & Johnson 執行長以及日本 Prof. Kenji Shibuya, Professor and Chairman, Department of Global Health Policy, Graduate School of Medicine, The University of Tokyo，共同討論分享如何在疾病照護的三個層次，預防、早期篩檢、介入措施與整合式疾病管理，有效創新與投資，來改善健康成果(health outcomes)，以及 increase saving and enhance economic performance。與談人以公部門、私部門等之創新投資舉例說明，讓與會者受益良多。

五、 Session Three: Supporting Innovation Across the Healthcare Ecosystem (此部分為分組討論，本局參加 Group C: Detecting Diseases)

該場由本局邱局長，Mr. Harry Goh, Director, Government Affairs & Policy, Malaysia & Brunei, GE Healthcare，Mr. Emmanuel (Manny) Mpock, President & CEO, MEC Dynamics , Dr. Edward Michael, Executive Vice President, Diagnostics, Abbott，共同參與討論，並針對 How can stakeholders work together to accomplish better strategies for early detection/prevention?這個問題從心血管疾病、癌症及糖尿病與與會者進行討論，另亦就行動科技在低收入國家對於防治慢性病可扮演的角色(What role can mobile technologies play in addressing these issues? Especially in lower income countries)以及什麼是早期篩檢及介入措施中有價值的事？如何能做的更好來推展這些有價值的事(Convincing stakeholders and public of value of early intervention and detection, What should be promoted as valuable? What could we do better to promote value?)這幾個問題互相分享。會中，大家皆一致認為由於資源有限，每個國家第一重要的是皆應有就自己人民需要的優

先順序，例如中國與印度心血管疾病是人民健康最大風險，而我國是癌症等，並以實證基礎為前提，制定自己的篩檢及介入措施，例如子宮頸癌篩檢、大腸癌篩檢等，有效又便宜，而肺癌用 CT，則不符成本效益，其中局長也特別提戒菸是實證能降低肺癌及其他疾病風險，也獲得大家一致認同。第二，應訂定 National Guidelines，以有效執行及確保品質。另應善用 health workers，包括 midwifes, community public health nurses 等，給予良好的訓練，配合篩檢工具，如量血壓，血糖等，確實做好篩檢。第三，整合現有已提供的篩檢，提供創新提供服務的模式增加篩檢效益，例如泰國為婦女提供 Single-visit approach，讓弱勢婦女也能得到子宮頸癌篩檢。另局長並就「Achieving the target of the expanded cancer screening program in Chinese Taipei: Transforming healthcare , saving more lives」，將我國癌症篩檢的策略與如何創新整合四癌篩檢服務以及其良好的成效向大家說明並提供書面簡報(如附件四)。

六、Conclusion

最後由 H.E. Suwit Khunkitti, Chair of the APEC LISF 及 Dr. Masato Mugitani, Chair of the APEC HWG 分別上台感謝大家參與及此次辦理會議的工作同仁後結束。

肆、心得與建議

一、持續參與 APEC 衛生相關會議及論壇：

(一)善用 APEC Health Working Group 平台，與 21 個會員體分享及交換經驗。另 NCD 防治為 HWG 新增議題，會員體高度重視，可經由在 HWG 提案申請舉辦研討會、會議等計畫，與其他國家合作。

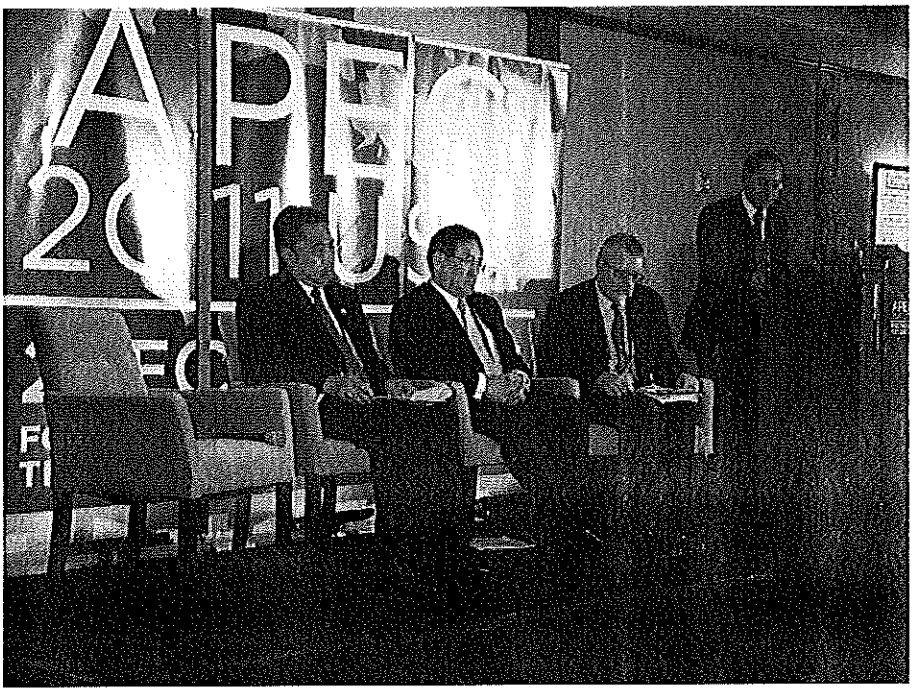
(二)持續參與衛生政策論壇(health Policy Dialogue)，並在我國擔任 HWG 副主席(2011- 2012)期間，展現我國健康老化、慢性病防治等之優勢政策作為，增加我國際能見度。

二、善用本次會議的與會專家，如世界衛生組主管老化部門主任 John Beard, Director, Department of Aging and Life Course, Department of Gender, Women & Health，以及六國之衛生部長及官員等來台參加本局舉辦會議，以拓展本局與國際組織及各國專家之關係。

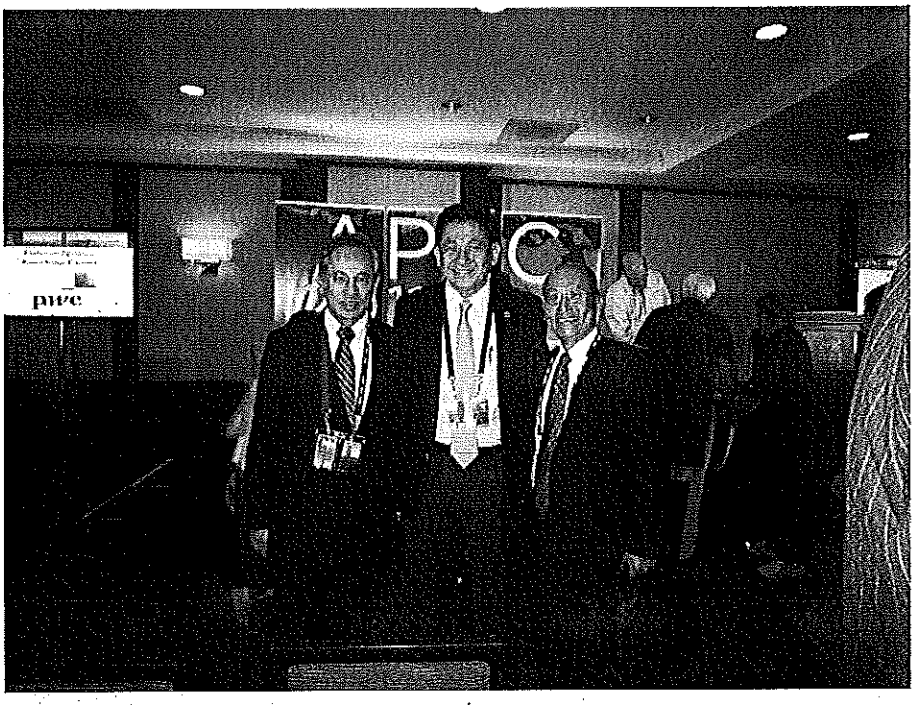
伍、附錄

附件一：參與會議活動照片

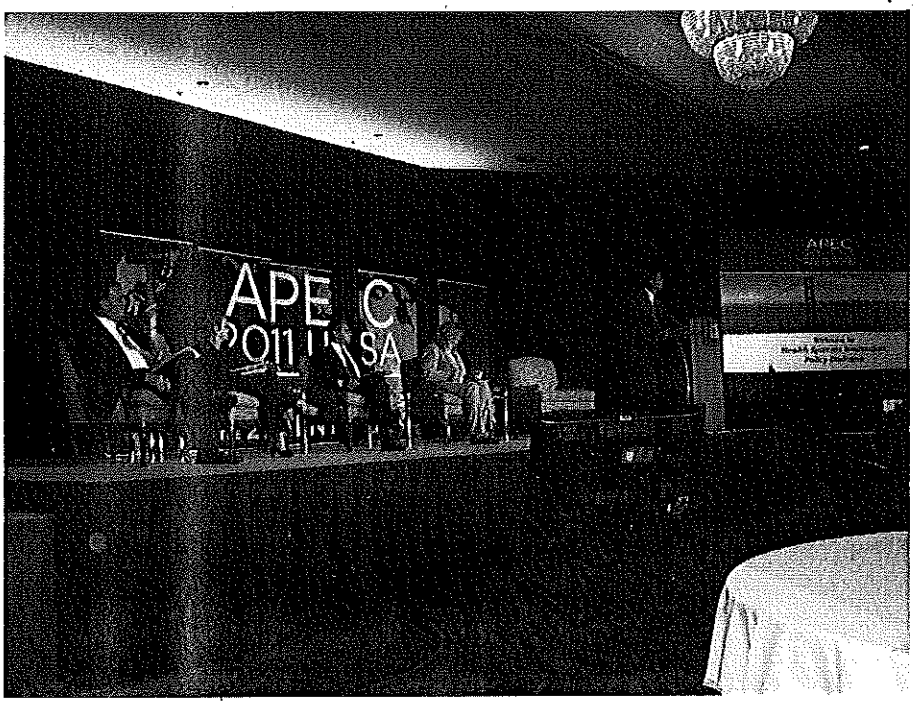
(一)邱署長於大會發表演講



(二)邱署長與部長合影

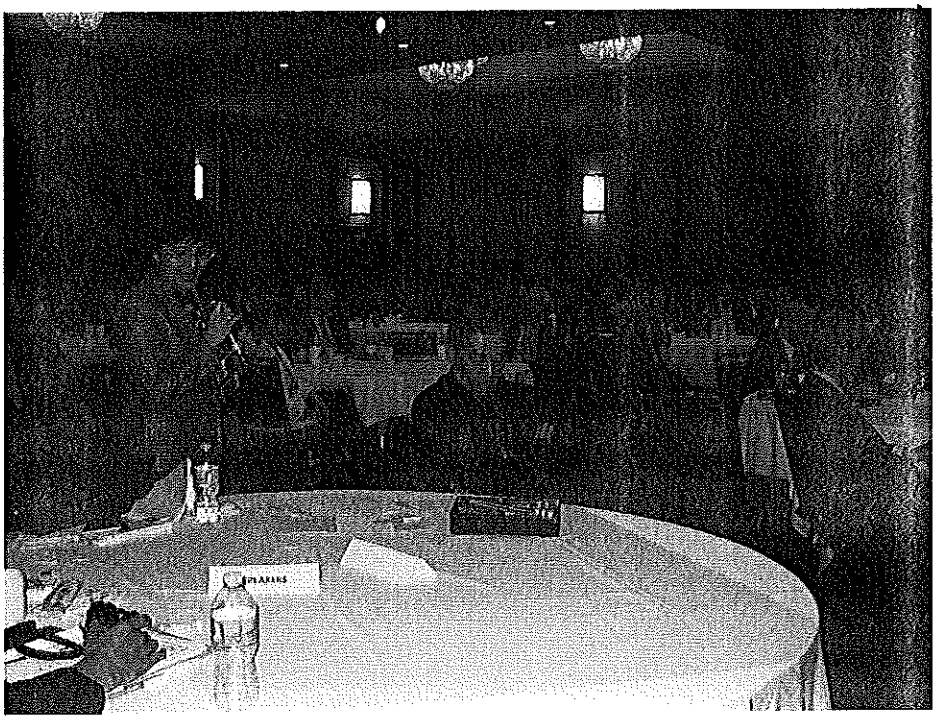


(三)大會 Panel 討論實況



(四)邱局長與講者合影

(五)邱局長在大會發表 Comments 及討論



(六)邱署長及邱局長參加大會晚宴與馬來西亞部長致意

(七)邱署長與馬來西亞衛生部長雙邊會談實況

附件二: APEC Health Systems Innovation Dialogue 議程

APEC Health Systems Innovation Policy Dialogue

The Westin St. Francis
San Francisco, California, USA
September 16 – 17, 2011

September 16	Program
14:00-14:05 *(Tower A)*	**Welcome** ***Welcome Remarks on behalf of the APEC USA 2011 Host Committee***
14:05-14:40	**Opening Keynote** ***Introduction of Keynote Speaker:*** **H.E. Suwit Khunkitti,** Chair of the APEC Life Sciences Innovation Forum ***Keynote Speaker:*** **The Honorable Kathleen Sebelius,** U.S. Secretary of Health and Human Services ***Comments:*** **Dr. Masato Mugitani,** Chair of the APEC HealthWorking Group
14:40-14:50	**Framing the Discussion: The Global NCD Challenge** This introduction to Session One will provide an overview of the social and economic burden of NCDs in the region and around the globe. **Speaker:** **Dr. John Lechleiter,** Chairman, President, and CEO, Eli Lilly & Company
14:50-16:05	**Session One: Addressing NCD Challenges in the APEC Region** Throughout the APEC region economies are developing and implementing innovative prevention and control strategies to address the rapidly growing economic burden of NCDs. In this session, participants will discuss some of the innovative approaches their governments are taking to reduce the economic burden of NCDs. ***Moderator:*** **Mr. Charles Goddard,** Editorial Director for Asia-Pacific, Economist Intelligence

	Unit *Panelists:* **H.E. York Chow,** Secretary for Food & Health, Hong Kong, China **H.E. Liow Tiong Lai,** Minister of Health, Malaysia **H.E.Wen-Ta Chiu,** Minister of Health, Chinese Taipei *Closing Comments:* **Dr. John Lechleiter,** Chairman, President, and CEO, Eli Lilly & Company
16:05-16:20	**NCDs and the Mexican Experience** *Introduction of Keynote Speaker:* **Master of Ceremonies – Dr. John Beard,** Director of the Department of Aging and Lifecourse and Director of the Department of Gender, Women and Health, World Health Organization *Keynote Speaker:* **H.E. Salomón Chertorivski,** Secretary of Health, Mexico
16:20-16:35	**Coffee Break**
16:35-17:50	**Session Two: Health Investment and the Economic Burden of Disease** This session will explore how well targeted investments in health innovations across the continuum of care - prevention, early detection, early intervention, and integrated disease management – can improve health outcomes, increase savings, and enhance economic performance. Panelists will discuss examples of public, private, and multisectoral investments in health innovations that have yielded such returns. *Moderator:* **Dr. Peter Sheehan,** Director, Centre for Strategic Economic Studies, Victoria University and Academic Co-Chair of the LSIF *Panelists:* **H.E. Pehin Dato Adanan Yusof,** Minister of Health, Brunei Darussalam **H.E. Carlos Alberto Tejada Noriega,** Minister of Health, Peru **Mr.William Weldon,** Chairman and CEO, Johnson & Johnson **Prof. Kenji Shibuya,** Professor and Chairman, Department of Global Health Policy,

	Graduate School of Medicine, The University of Tokyo
17:50-18:00	**Summary of Day One** **Master of Ceremonies – Dr. John Beard,** Director of the Department of Aging and Lifecourse and Director of the Department of Gender,Women and Health,World Health Organization
18:30-21:00	**Gala Dinner** **Introduction of Keynote Speaker:** **Dr. KimTan, APEC LSIF Board Member and Chairman, SpringHill Management Ltd.** **Keynote Speaker:** **APEC Minister of Health or Industry speaker fromAPEC Economy** **Day 1 Closing Remarks on behalf of the APEC 2011 USA Host Committee**

Day 2 Program– September 17

September 17	Program
9:00-9:30 *Grand Ballroom*	**Welcome & Day Two Opening Keynote** *Welcome:* **Master of Ceremonies – Dr. John Beard,** Director of the Department of Aging and Lifecourse and Director of the Department of Gender,Women and Health,World Health Organization *Keynote Speaker:* **Dr. Donald Tung-Fu Shang,** Vice Chair of the APEC Health Working Group and Bureau of International Cooperation, Department of Health, Chinese Taipei
Session Three: Supporting Innovation Across the Healthcare Ecosystem Participants will break into smaller groups to engage in a 90-minute discussion on innovative solutions and best practices in the research, prevention, detection, and management of NCDs. For the first 60 minutes, the small group of selected discussants will share key lessons learned from innovative public, private, and mutlisectoral programs and deliberate on a series of questions on the topic and a key question: *How can and should we be doing things differently and better?* With 20 minutes remaining, all	

group participants will work together to develop recommendations and identify key best practices in their topic area. In Session 4, facilitators will present their group's key recommendations to the plenary.	
9:30-11:00 *Elizabethan* *Room A*	**Group A: Research & Development** Participants will discuss the following questions: How can stakeholders collaborate more effectively to develop effective therapeutic and health care delivery solutions to chronic disease? How can innovative technologies be deployed and what policies would best facilitate new partnership opportunities in research and development and services delivery? What are lessons learned and innovative R&D partnership models that could be expanded in the region? Where do opportunities currently exist for further public-private partnerships? **Group Facilitator:** Dr. **Kim Tan**, APEC LSIF Board Member and Chairman, SpringHill Management Ltd. **Discussants:** **Mr. GrahamAlmond**, Vice President, South East Asia, Sanofi **Dr. Kenneth Stein**, Senior Vice President & Chief Medical Officer, Cardiac Rhythm Management Division, Boston Scientific **Dr. Robert Bargatze**, Executive Vice President and Chief Science Officer, Ligocyte Pharmaceuticals, Inc. **Dr. Christophe Lambert,** President & CEO, Golden Helix, Inc.
9:30-11:00 *Elizabethan* *Room B*	***Group B: Preventing Disease*** Participants will discuss the following questions: *How do we foster health-literate citizens and what are the most effective education strategies in reducing behaviors that lead to heightened risk for chronic disease?* *How can these education strategies, along with the significant benefits of heightened chronic disease prevention, be promoted to all stakeholders as well as better showcased to the public?* *How can key stakeholders encourage more effective chronic disease*

	prevention? *How can economies track and share information on the improvement in selected key health indicators and the reduction in risk factors?* ***Group Facilitator:*** **Dr. Fikry Isaac**, Vice President of Global Health Services, Johnson & Johnson, and Industry Co-Chair of the LSIF ***Discussants:*** **Dr. Donald Tung-Fu Shang**, Vice Chair of the APEC HealthWorking Group and Bureau of International Cooperation, Department of Health, Chinese Taipei **Dr. Rubén Torres**, Manger, Area of Health Systems based on Primary Health Care,Pan American Health Organization/World Health Organization
9:30-11:00 *Elizabethan Room C*	***Group C: Detecting Disease*** Participants will discuss the following questions: *How can the significant benefits of early detection and early intervention be promoted to all stakeholders and better showcased to the public?* *How can key stakeholders work together to encourage participation in early detection and early intervention programs?What are effective strategies worth building upon?* ***Group Facilitator:*** **TBD** ***Discussants:*** **Dr. Shu-Ti Chiou**, Director General, Bureau of Health Promotion, Department of Health **Dr. Edward Michael**, Executive Vice President, Diagnostics, Abbott **Mr. Harry Goh**, Director, Government Affairs & Policy, Malaysia & Brunei, GE Healthcare **Mr. Emmanuel (Manny) Mpock**, President & CEO, MEC Dynamics

9:30-11:00 *Elizabethan Room D*	*Group D: Managing Disease* Participants will discuss the following questions: *Which integrated disease management models have shown the greatest promise and what are the roles of key stakeholders?* *What are the most effective tools of integrated disease management?* *How can the significant benefits of integrated disease management be promoted to all stakeholders and better showcased to the public?* ***Group Facilitator:*** **TBD** ***Discussants:*** **Dr. Sarah Muttitt**, Chief Information Officer, Ministry of Health Holdings, Singapore **Dr. Dennis Schmuland**, Chief Health Strategy Officer, US Health & Life Sciences, Microsoft Corporation **Dr. Zakir Sikder**, Managing Director, Telemedicine Reference Center Ltd. **Dr. Trevor Gunn**, Senior Director International Relations, Medtronic
11:00-11:15 *Italian Room Foyer*	**Coffee Break**
11:15-12:15 *Grand Ballroom*	**Session Four: Developing an Action Plan to Strengthen APEC Health Systems** **-Reports fromBreakout Sessions** Group facilitators from Session 3 will present their roundtable group's key recommendations to the plenary. The LSIF Academic Co-Chair and LSIF Industry Co-Chair will present the *Elements of a Proposed APEC Action Plan to Reduce the Economic Burden of NCDs.* ***Moderator:*** **Dr. Peter Sheehan**, Director, Centre for Strategic Economic Studies, Victoria University and Academic Co-Chair of the LSIF ***Discussants:*** **Dr. Fikry Isaac**, Vice President of Global Health Services, Johnson & Johnson, and Industry Co-Chair of the LSIF **Dr. Kim Tan**, APEC LSIF Board Member and Chairman, SpringHill Management Ltd.

12:15-14:00	**Working Luncheon** At 12:15pm, we will take a 15 minute break. At this time participants are invited to pick up a boxed lunch from the Italian Room Foyer. The program will resume promptly at 12:30pm.
	Session Five:Measuring the Impact of Health Investment on Economic Growth This session will explore ways of cooperating to track and measure progress in reducing the economic burden of disease. Speakers will discuss key measurement tools used across public and private organizations to assess improved health and related economic outcomes across the region. What are the key tools used to measure progress? How can we improve surveillance at the economy and regional level? What are key indicators of progress relevant to APEC economies? **Moderator:** **TBD** **Panelists:** **Dr. Leslie Mancuso,** President and CEO, Jhpiego **Prof. IanWronski,** Pro Vice-Chancellor and Executive Dean, Faculty of Medicine, Health and Molecular Sciences, James Cook University --- **Conclusion** **Master of Ceremonies** – **Dr. John Beard,** Director of the Department of Aging and Lifecourse and Director of the Department of Gender, Women and Health, World Health Organization **H.E. Suwit Khunkitti,** Chair of the APEC Life Sciences Innovation Forum **Dr. Masato Mugitani,** Chair of the APEC HealthWorking Group

附件三：署長演講簡報

Addressing NCD Challenges- Cancer Prevention and Control in Chinese Taipei

Dr. Wen-Ta Chiu M.D., Ph.D.
Minister, Department of Health
Chinese Taipei

1

Cancer prevention and control in Chinese Taipei

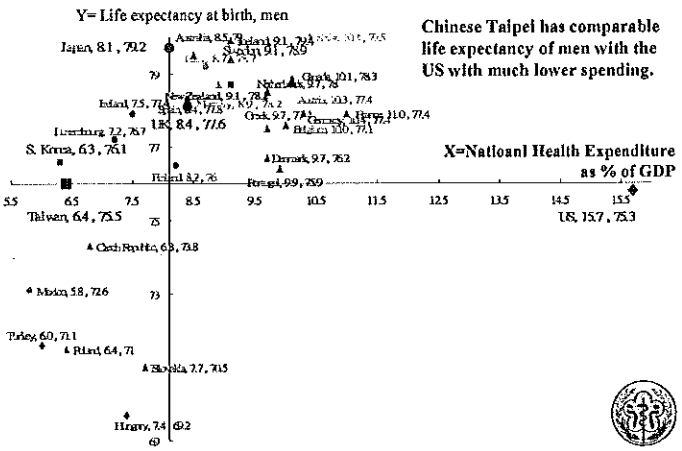
- Introduction
- Burden of cancers and their risk factors in Chinene Taipei
- Strategies and achievements for cancer prevention and control
- The Way Forward

2

Introduction

3

Comparison of health status and health spending between Chinese Taipei and OECD members, 2007

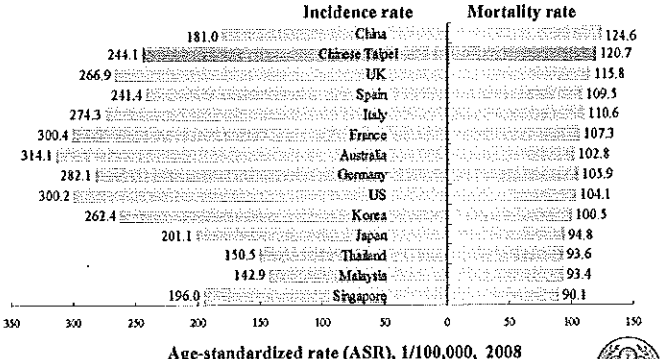


Comparing burdens of major NCDs between Chinese Taipei and several Asia-Pacific and European Economies

6

Cancer -- Incidence & Mortality Rate

Cancer is the top leading cause of death in Chinese Taipei. The incidence and mortality rates are both higher than many other countries



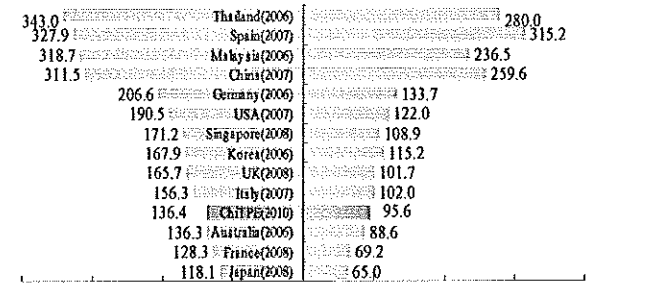
Age-standardized rate (ASR), 1/100,000, 2008

Source: 1. GLOBOCAN 2008, IARC

7 2. Chinese Taipei data from 2008 Taiwan Cancer Registry and 2008 Statistics of Major Causes of Death

Cardiovascular diseases and Diabetes -- Death rate

Chinese Taipei has much lower CVD death rate than the other countries.

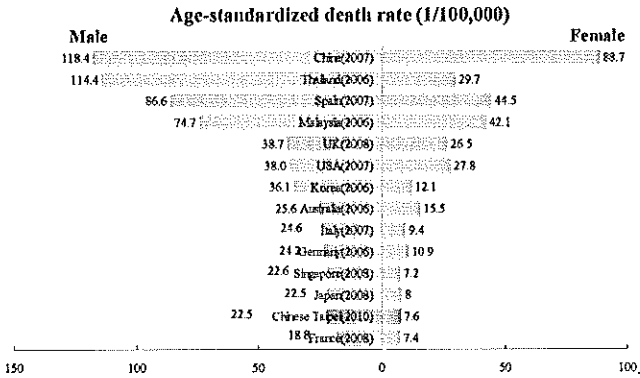


Source : Global status report on noncommunicable diseases 2010. The data for Chinese Taipei include DM and CVD (CVD consists of heart diseases, cerebrovascular diseases, and hypertensive diseases)

Figures were calculated from the 2010 Vital Statistics, adjusted for the 2000 WHO population

8

Chronic Respiratory Diseases -- Death rate



Source : Global status report on noncommunicable diseases 2010

Chinese Taipei : Department of Health, Executive Yuan, Chinese Taipei

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Among the 4 major NCDs,

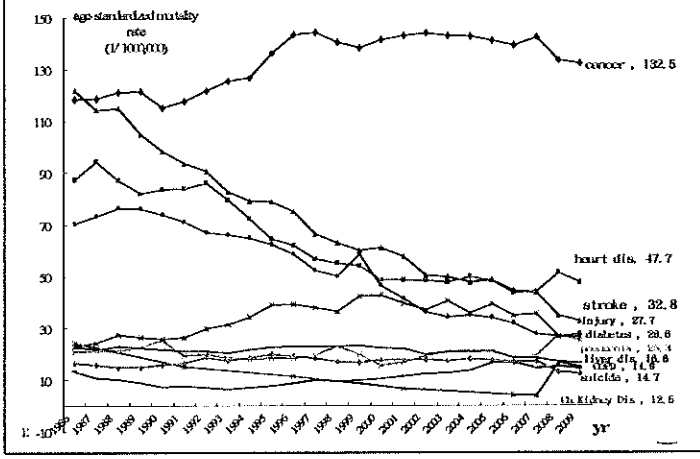
- Chinese Taipei has lower mortalities from chronic respiratory diseases and CVD and diabetes,
- but the mortality from cancers are extraordinarily **high** as compared with other Asia-Pacific and European Economies.
- So, we will focus today's analysis on cancer prevention and control.

10

Burden of cancers and their risk factors in Chinese Taipei

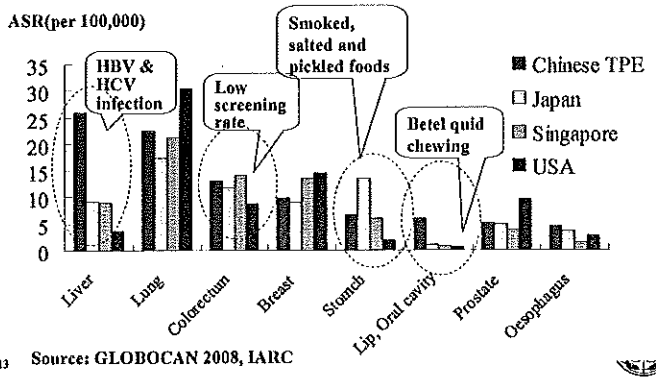
11

Top 10 Leading causes of death in Chinese TPE



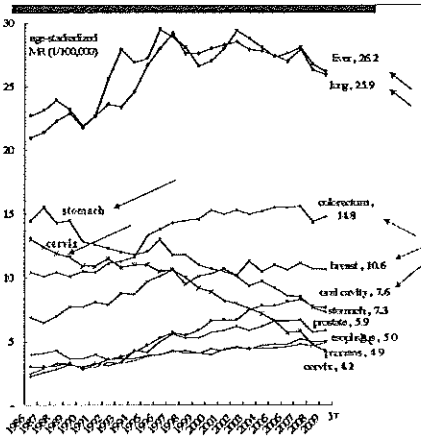
Comparing mortalities of major cancers between Chinese Taipei, Japan, US and UK

As compared with the US., Chinese Taipei has higher mortality from cancers of liver, colorectum, stomach and oral cavity.



13 Source: GLOBOCAN 2008, IARC

Major fatal cancers and their trends



Up to 2007, among the leading cancers,

- mortalities from liver, lung, stomach and cervix are declining, but
- those from colorectum, breast, and oral cavity are rising.
- The importance of obesity, unhealthy diets and physical inactivity has emerged.

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Burden of Cancers in Chinese TPE

- Cancer has been the number 1 killer in Taiwan since 1982.
- The death tolls continued to rise until 2007 and accounted for 28.1% of total deaths and 10.1% of National Health Insurance expenditure in 2009.

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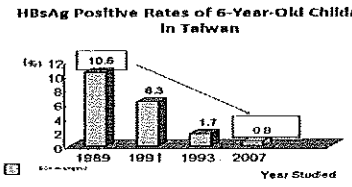
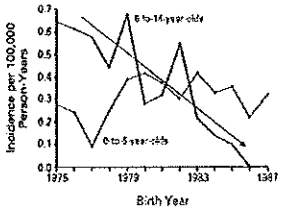
Experiences of past successes:
1. Universal HBV vaccination and hepatocellular carcinoma

- HBV vaccination program for infants was launched in 1984

Effect:

- Infection: HBsAg(+) rate among childen aged 6 decreased from 10.5% in 1989 to 0.8% in 2007
- Incidence: the incidence of childhood hepatoma declined significantly





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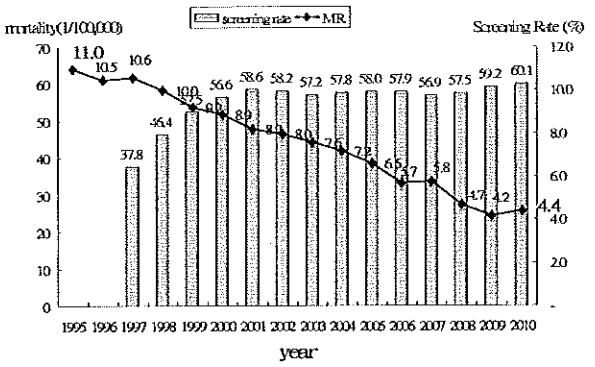
2. Screening and of cervical cancer mortality in Taiwan

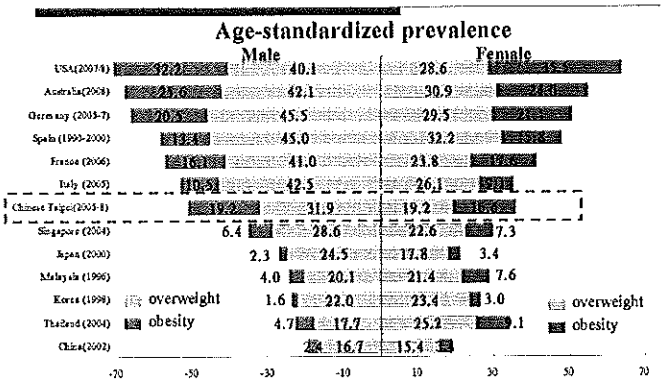


17

Prevalence of major risk factors

18

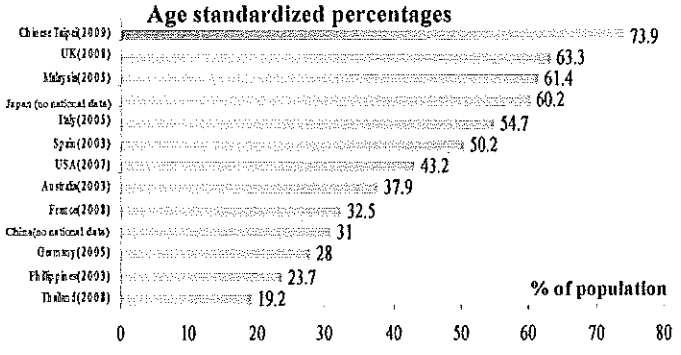
Overweight and obesity in adults



Data sources: International Obesity Taskforce (IOTF)
Europe: overweight:25≦BMI<30；obesity:BMI≧30 (2008, 20+ years old)
Asia: depends on each countries' standard
Chinese Taipei: Nutrition and Health Survey in Taiwan (NAHSIT).
overweight:24≦BMI<27；obesity:BMI≧27 (2005-2008, 18+ years old)

19

Physical inactivity



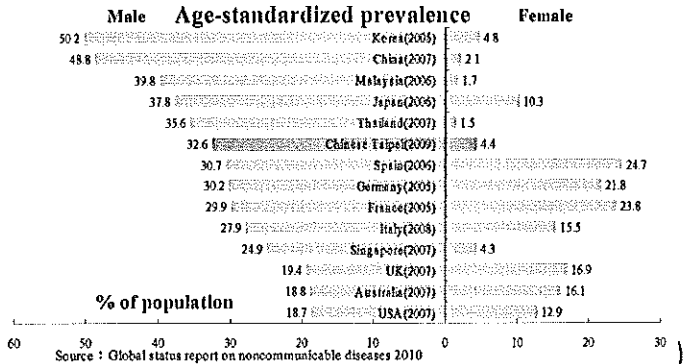
Insufficient physical activity is defined as less than five times 30 minutes of moderate activity per week, or less than three times 20 minutes of vigorous activity per week, or equivalent.

Chinese Taipei : Insufficient physical activity is defined as less than 3 times 30 minutes of moderate activity per w

20 Source : Global status report on noncommunicable diseases 2010

Daily tobacco smoking in adults aged 15+ years

Chinese Taipei's male smoking rate is lower than that of many Asian countries but higher than Singapore and Western countries.

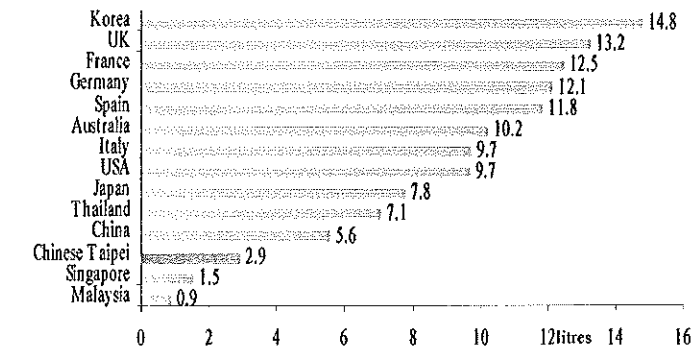


Source : Global status report on noncommunicable diseases 2010

21 Source of data: National Health Interview Survey, Chinese Taipei, 2009

Total adult (15+ years of age) per capita consumption of pure alcohol (litres)

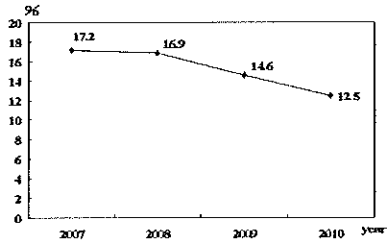
The consumption of alcohol is low.

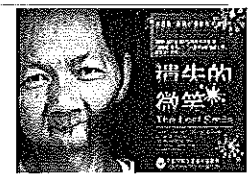


Source : Global status report on noncommunicable diseases 2010

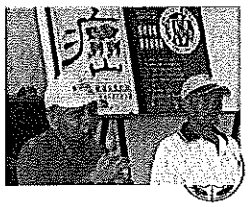
22 Chinese Taipei: Statistics Department, Executive Yuan 2008

Betel quid chewing rate among adult men, Chinese Taipei, 2009





Oral cancer patients endorse anti betel quid chewing campaign



Betel Quids

Source : BRFSS, Taiwan

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Hepatitis virus infection

- Prevalence of Hepatitis Virus Infection in adults (18 years of age or older) :
  - Hepatitis **B** virus infection: **17.3%** (21% in men, 14% in women) ◦
  - Hepatitis **C** virus infection: **4.4%** (4.5% in men, 4.3% in women) ◦
- Among persons who died from liver cancer, 70% had HBV infection, 20% had HCV infection.

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Economic burden of tobacco and obesity in Chinese Taipei

- **Tobacco use** accounted for 16-20% of annual deaths and a total loss of **4.1 billions USD** from medical cost and productivity loss (equivalent to **0.92% of GDP** of Chinese TPE) in 2007 (Lee, YC, 2010)
- The direct cost of **obesity** and overweight, as estimated by excessive morbidity of 6 metabolic and cardiovascular conditions, is equivalent to **2.9%** of Chinese Taipei's national health expenditure (Cost of excessive cancers and osteoarthritis were not included).

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Comparing with other Asia-Pacific and European Economies,

- Chinese Taipei has--
  - **higher** burden of **cancers** and prevalence of **physical inactivity,**
  - **in-between** burdens of **obesity** and prevalence of **smoking,** and
  - **lower** consumption of **alcohol.**
- In addition to the common risk factors, Taiwan has its unique cancer risks including **hepatitis virus infection and betel quid chewing** behavior.

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Strategies and achievements for cancer prevention and control in Chinese Taipei

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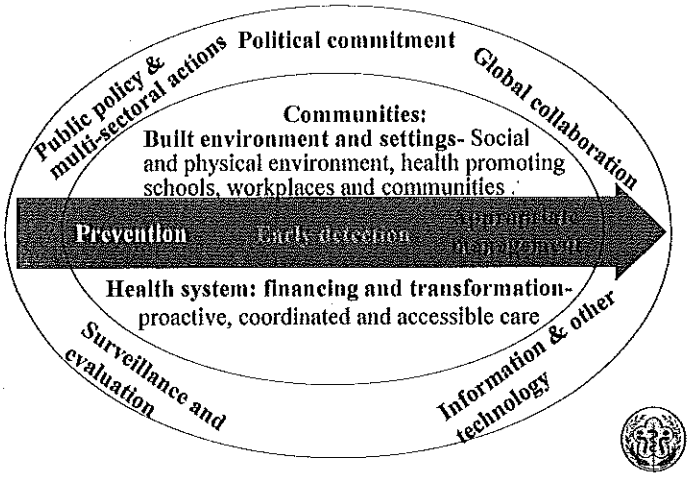
Framework of NCD Prevention and Control



Strategies of cancer prevention and control in Chinese Taipei

- Political commitment
- Policy and multi-sectoral actions
- Health system: financing, transformation and technology application for
  - Early detection,
  - Diagnosis and management,
  - Prevention;
- Communities: Supportive built environment and settings
- Surveillance and evaluation
- Global collaboration

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Political commitment

- **The President** announced reduction of cancer mortality by 10% as one of the top 10 priorities in health matters during his election campaign in 2007.
- **National Plan on Cancer Control 2010-2013** was signed by the Prime Minister to reduce age-standardized cancer mortalty rate from 132.5 deaths/100,000 in 2009 to 119.3 deaths/100,000 **by 2015** (10% of reduction in 6 years).
- In the President's **"Golden 10 Years" Megaplan** for Taiwan (to be issued recently), mortality from cancers will have a **further reduction of 10% by 2021** (i.e. totally 19% reduction from 2009).

30

We adopted three approaches to reduce cancer burden-

1. The expanded national cancer **screening program** would cover evidence-based screening for 4 major cancers to be totally paid by the government since 2010 (i.e. colorectal cancer, breast cancer and oral cancer plus the preexisting cervical cancer screening);
2. The national accreditation program for **quality cancer care** would be updated in 2011 to support hospitals to provide quality teamwork and good performance in cancer diagnosis, treatment and survivorship care; and
3. The **prevention** of cancers would highlight emerging obesity and physical inactivity issues in 2011.

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Policy and multi-sectoral actions

- **Related national acts:**
  - Act of Cancer Prevention and Control (effective in 2003)
  - Tobacco Hazards Prevention Act (effective in 1997, amended and effective in 2009)
  - Statute for Sports Industries Development (passed in 2011, governed by Sports Affairs Council)
- **Legislations in preparation:**
  - Population Nutrition Act (draft)
  - Alcohol Hazards Prevention Act (draft)
  - Betal Quid Hazards Prevention Act (in discussion)

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Health system financing, transformation and technology application

- for screening
- for high quality diagnosis and care
- for prevention

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Health system financing, transformation and technology application for screening

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Health system financing, transformation and technology application for screening

- **Financing:** the amount of tobacco surcharge was raised from 0.33 USD per pack to 0.66 in 2009; a share of 6% was allocated for cancer screening.
- **Full coverage** of screening for 4 major cancers with no co-pay since 2010.
- **Multi-channel devivery system:**
  - All clinical settings such as hosptals, clinics and health centers, by qualified personnel and equipments.
  - Outreached community services in workplaces and community venues by qualified public health team or clinical team.
  - Mailed screening at home: HPV screening, iFOBT

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Transforming hospital practice to increase national screening capacity

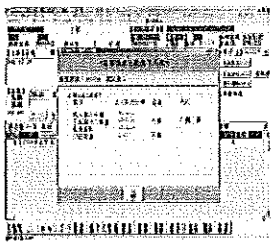
- An estimate of **60-70%** of the target population for cancer screening had at least one encounter with hospital(s) in 2008. Re-orientation of hospital practice may significantly increase the national screening capacity.
- Four actions are taken to transform hospital practice:

1. We offered project-based subsidy for hospitals to achieve targets of screening rates;
2. We established a module of new hospital practices including extra personnel, new IT function for automatic reminding and tracking of results, and self-monitoring and analysis of cancer screening performance;
3. We implemented external monitoring, feedback and public reporting on hospital screening performances; and
4. We provide extra pay for good performance in addition to project-based subsidy.

36

IT and cancer screening

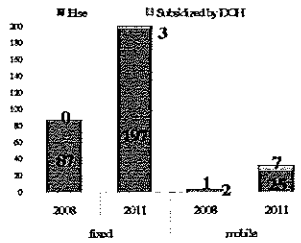
- Automatic reminding in hopsital information system
- Automatic notification of critical test results to providers and patients



37

Example of applying new technology to cancer screening

Growth of mammography machines in Taiwan



fixed 87=>200 mobile 3=>32

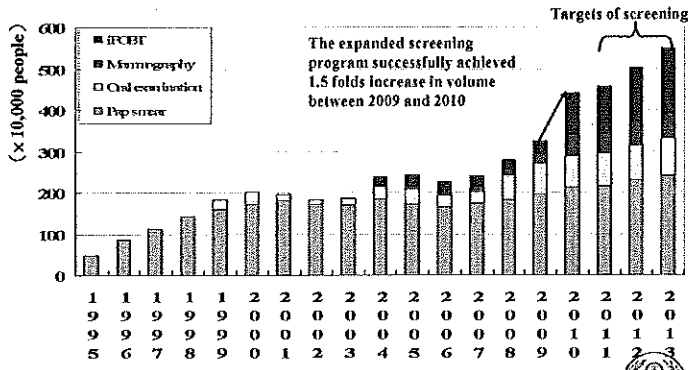
Total 70 => 232 (162 more)

Only 11 were directly subsidized by DOH;

Most were installed under the increased demand of screening and follow up.

38

Number of Cancer Screening Services, 1995-2013



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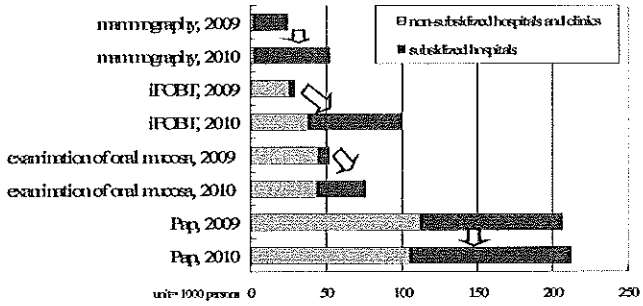
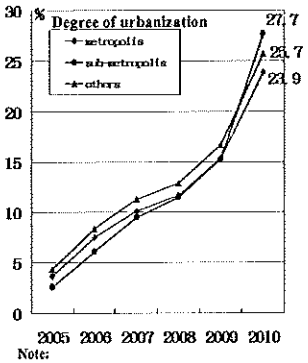
Comparison on growth of screening volume between subsidized hospitals and non-subsided health services



The growth of screening volume in 2010 arose mainly from subsidized hospitals; and the occupance of total screening by these hospitals rose from 41% in 2009 to 57% in 2010

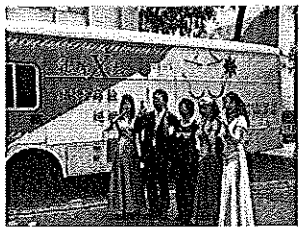
40

Mammography screening rates by degree of urbanization



Note:
- Metropolis: having 1million or more populations
- Sub-metropolis: 0.3-1 million pop.
- Others: < 0.3 million pop.

The outreach digital mobile services have successfully ensured comparable screening rates in resource-limited communities



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Health system transformation for diagnosis and care

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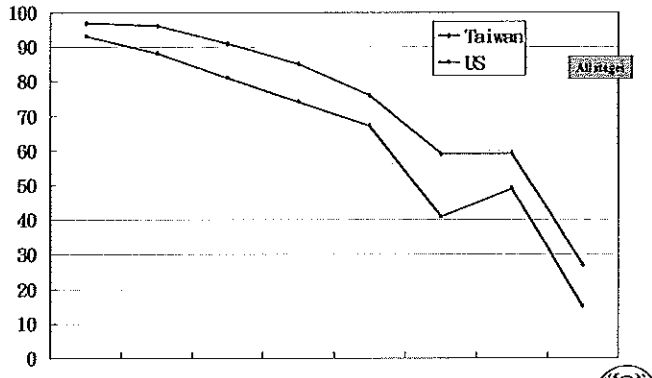
Health system transformation for diagnosis and care

- **Accreditation program for quality cancer diagnosis and care**
  - Adopting the "Cancer Program Standards" of Commission on Cancer, American College of Surgeons
  - Officially launched in 2008, updated in 2011
- **Eligibility of application:** hospitals with more than 500 new cancer cases per year
- **41 among 43 eligible hospitals have passed the accreditation,** covering care for 80% of total cancer cases

43

Stage Specific 5-year Survival Rates of Breast Cancer in Taiwan and US



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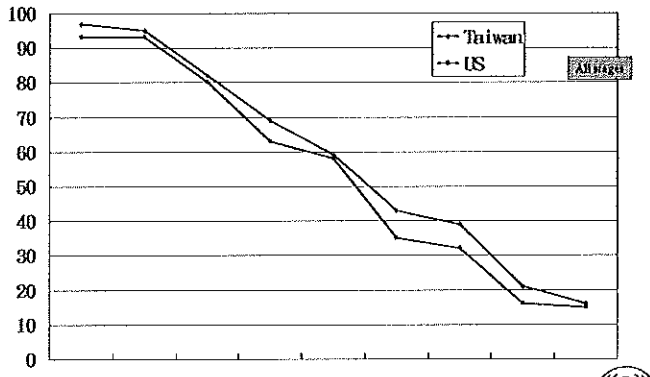
Stage Specific 5-year Survival Rates of Cervix Cancer in Taiwan and US



45

Health system and technology application for prevention

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Health system and technology application for prevention

- Mass vaccination for HBV infection was launched in 1984;
- Treatment and follow-up of viral hepatitis was covered by National Health Insurance since 2003;
- HPV vaccines were approved in 2006 & 2008; DOH paid for vaccinatopn of disadvantaged girls (i.e. girls of low-income families or living in remote communities) since 2011
- Smoking cessation services were partially subsidized by DOH since 2003; full coverage will be launched in December, 2011.

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Communities: supportive built environment and settings for cancer prevention

- Tobacco control
- Obesity, unhealthy eating, and physical inactivity

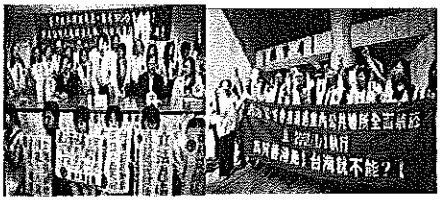
48

Tobacco control

- Chinese Taipei ratified WHO FCTC (Framework Convention on Tobacco Control) in 2005 and adopted MPOWER package
- **Smoking is banned** in all indoor public spaces and all indoor workplaces with 3 or more workers.
- **Satisfaction on smoke-free environment** is as high as 92%.
- Smoking rate for adult men is still as high as 35%.
- **Full-coverage of cessation services** including counseling and medications is to be launched in December.
- Next step: to review and **consider further raise of tobacco surcharge**

49

The president called for Quit and Win, 2010



Civial Society advocating for expanded tobacco control to lawmakers

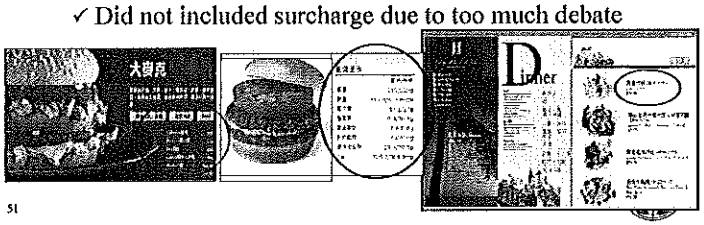
A famous singer advocats for Quit and Win, 2010

Total ban in hospitals

Pictorial warning on front package

□Obesity prevention and control

- Population Nutrition Act (draft):
  - ✓ Allow the government to introduce restrictions on advertisement or promotion of junk foods;
  - ✓ Require mandatory nutrition labeling for certain types of food establishment;
  - ✓ Allow the government to introduce traffic-light labeling on food packages;
  - ✓ Did not included surcharge due to too much debate



51

□Obesity prevention and control

- The "600 metric tons away" campaign in 2011:
  - ✓ Aimed to recruit 600,000 persons from workplaces, schools, communities, and healthcare settings to lose 600,000 Kg of excessive body weight by "eat smartly, move joyfully, weigh yourself daily".
  - ✓ A social movement to raise public awareness on obesity epidemic, obesogenic environment and skills of healthy living.
  - ✓ Lead by the President and the Prime Minister,
  - ✓ Coordinated by DOH and county health bureaus.

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President Ma made his public advocacy for "Healthy Centenary, Healthy Taiwan "

Kick-off ceremony held by the Executive Yuan on 24th January

53

Promoting Physical Activities

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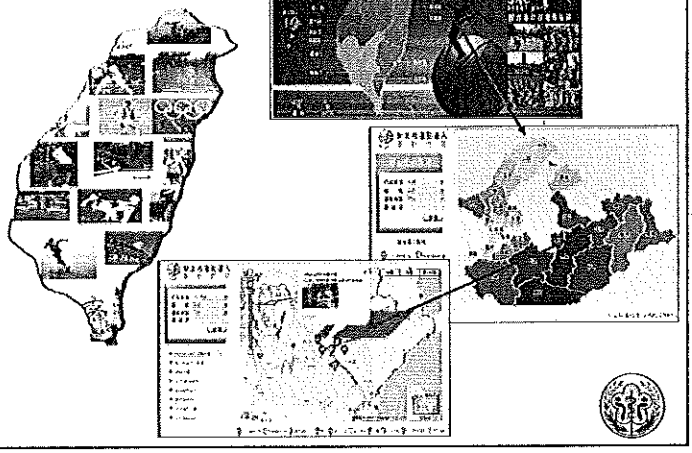
Sport Map



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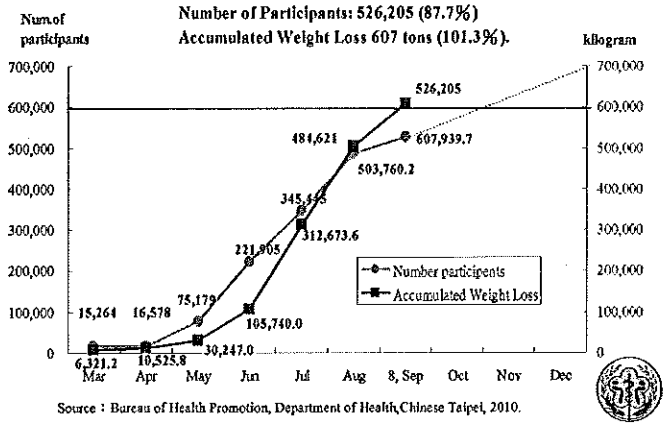
600 Tons Away Campaign 2011 (as of 8th Sep.)



56 Source : Bureau of Health Promotion, Department of Health,Chinese Taipei, 2010.

Surveillance and evaluation

- Mortality:
  - Causes of death registry
- Morbidity and healthcare utilization:
  - Cancer registry
  - Household registry + Cancer screening registry
  - Claim Data of National Health Insurance
- Surveillance on risk factors :
  - Behaviroal risk factors surveillance system (every year)
  - National Health Interview (every 4 years)
  - Measurement on obesogenic environments
- Evaluation of public awareness and practice

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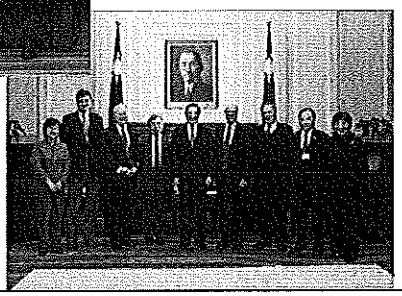
Global Collaboration

President Ma invited international experts to discuss about national policies for obesity prevention



Prof. Boyd Swimburn, Director, WHO Collaborating Centre for Obesity Prevention, Co-chair, the International Obesity Task Force (IOTF)

58

The way forward

59

Conclusions -1

- **Chinese Taipei has**
  - higher burden of **cancers** and prevalence of **physical inactivity,**
  - average burdens of **obesity** and prevalence of **smoking,** and
  - lower consumption of **alcohol.**
- Chinese Taipei has identified its unique needs in controlling for the extraordinarily high burden of cancers and has **turned it into strong political commitment and evidence-based actions.**

60

Conclusions -2

- **In the past,** Chinese Taipei has successfully
  - prevented HBV-related cancers by mass vaccination,
  - reduced cervical cancer mortality by two thirds through population-based screening, and
  - reduced male smoking rate by one third through its enactment of Tobacco Hazards Prevention Act.

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Conclusions -3

- **Currently,**
  - Chinese Taipei **expanded its population-based screening program** to the other 3 cancers with rising mortalities and available evidence-based screening tools.
  - By effective **funding and transformation of the health system** as well as the application of new technology, Chinese Taipei has successfully improved its capacity in cancer screening, diagnosis and treatment.
  - Such improvement in turn has brought about the highest-ever and equitable growth in **cancer screening volume** by 1.5 folds as well as **the stage-specific cancer survivals** which are comparable to those of the U.S..

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Conclusions -4

- **Chinese Taipei recognizes the importance of prevention as a core component for long-term success and has included these in its future plan.**
- **In its way forward, Chinese Taipei will:**
  - further reduce its male smoking rate by half through perodic review of tobacco price and full coverage of cessation services;
  - turn the trend of obesity by policy intervention and creation of more supportive built environment for healthy eating and physically active living; and
  - reduce prevalence of physical inactivity by half through intersectoral collaboration, public-private partnership and improved built environment.

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Future Targets of Improvement

in "Golden 10 Years" MegaPlan for Taiwan:

Targets	Current, 2010	Future, 2021
Cancer mortality rate (1/100,000)	132.5 in 2009	119.3 by 2015 (10% ↓ of 2009) 107.3 by 2020 (10% ↓ of 2015)
Smoking rate (%)	Adults: 19.8 Men: 35.0 Women: 4.1	Adults: 10.8 (46% ↓) Men: 17.5 (50% ↓) Women: 4.1
Betal quid chewing rate (%)	Men: 12.5%	Men: 6.3% (50% ↓)
Lack of exercise in past 2 weeks (%)	Adults: 35.9	Adults: 18.0 (50% ↓)
Healthy BMI (%)	Men: 46.3 Women: 56.8 Boys: 52.3 Girls: 57.1	Men : 48.6 (5% ↑) Women : 59.6 (5% ↑) Boys : 57.5 (10% ↑) Girls : 61.2 (10% ↑)

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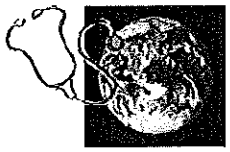
Cherishing Lives, Promoting Health…



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Cancer Control in Taiwan

Shu-Ti Chiou, MD, PhD, MSc
Director General
Bureau of Health Promotion, Department of Health
Chinese Taipei

1

Backgrounds of Cancer Control in Taiwan

- Cancer Control Act was promulgated in 2003
- President Ma: Lower the mortality of cancer by 10% in 4 years
- 6% of tobacco surcharge was allocated to cancer control according to the new Tobacco Hazards Prevention Act in 2009
  - expand the service of cancer screening
  - improve the quality of cancer care
- National Cancer Control Plan
  - Phase I: 2005-2009
  - Phase II: 2010-2013

2

Evidences of Cancer Screening

Screening tool	Effectiveness/Mortality (screening interval)	ICER (screening interval)
i-FOBT	↓ 18-33% (1-2 years)	Dominated
Pap smear	↓ 60-90% (3-5 years)	0.37 million NTDs (3 years)
Oral mucosa exam	↓ 43% (3 years)	0.33 million NTDs (2 years)
Mammography	↓ 21-34% (1-3 years)	1.21 million NTDs (2 years)

3

Cancer Screening Policies

Cancer	Target	Tool	Interval
Cervical Ca.	Women aged ≧30	Pap smear	3 years
	Women refused Pap Smear	HPV test	5 years
Breast Ca.	1.Women aged 45-69 2.Women aged 40-44 with family history	Mammography	2 years
Oral Ca.	Betel-quid chewers and smokers aged ≧30	Oral mucosa exam	2 years
Colorectal Ca.	People aged 50-69	i-FOBT	2 years

4

Objectives of National Cancer Control Program

Long term objective: ↓ cancer mortality by 10%

Cancer	Target	2009	2010	2013	
		Regular Screening rate	Regular Screening rate	Regular screening rate	Lifetime screening rate
Cervical Ca.	3-yr pap smear (or HPV) for female aged 30-69	58%	60%	70%	-
Breast Ca.	2-yr mammogram for female aged 45-69	11%	21%	30%	55%
Colorectal Ca.	2-yr I-FOBT for people aged 50-69	10%	22%	50%	70%
Oral Ca.	2-yr oral mucosa exam for smokers and betel-quid chewers aged 30+	28%	32%	50%	70%

5

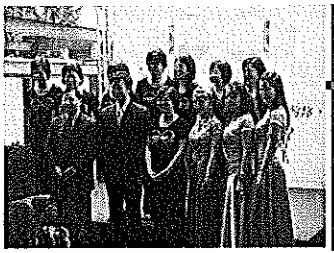
Strategies to Improve Screening Rate

6

Strategies to Promote Cancer Screening

- Promote Screening through mass media and working with NGOs and enterprises
- Provide accessible services (mobile clinics)
- Integrate cancer screening into hospital routine
  - reminding system
  - friendly screening service
  - patient education

7



Promote screening through mass media and working with NGOs and enterprises

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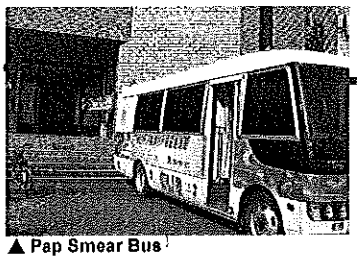
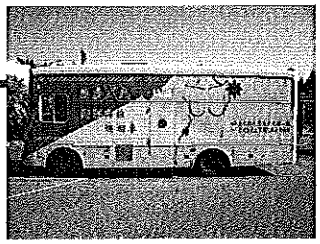


▲ Pap Smear Bus



▲ Mammography Bus

Provide accessible services (mobile clinics)

9

Integrate cancer screening into hospital routine

-reminding system
-friendly screening service
-patient education

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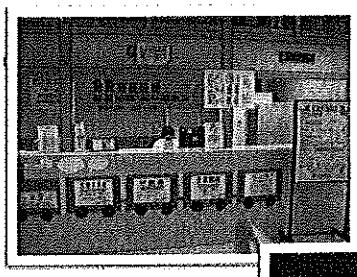

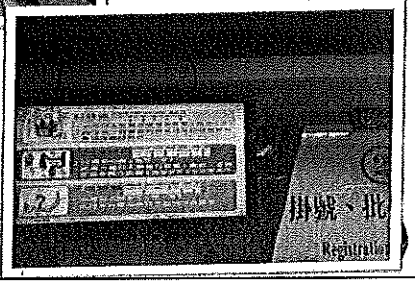

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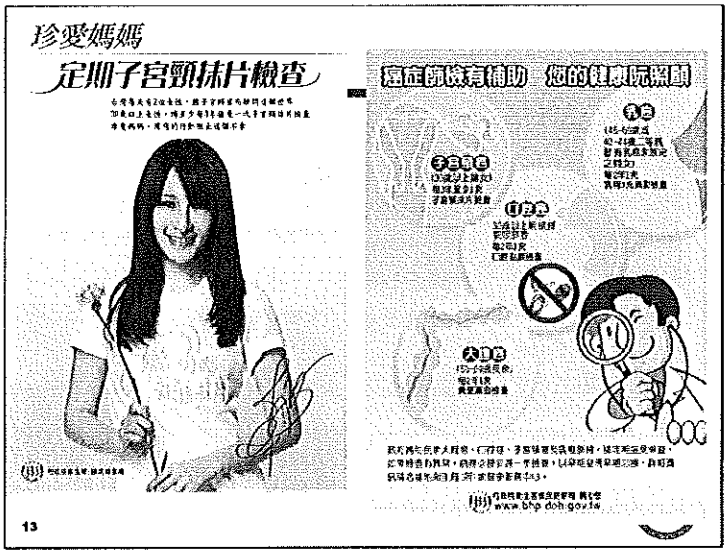

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The Growth of Screening Services between Subsidized Hospitals and Non-Subsidized Hospitals

- hospitals with 5000 or more outpatients aged above 30-year old were qualified to apply subsidy
- The outpatient services of 232 subsidized hospitals accounted for 92% of hospital outpatient services.

Cancer Type	Subsidized Hospitals			Non-subsidized Hospitals& Clinics		
	2009 (thousand)	2010 (thousand)	Growth By times	2009 (thousand)	2010 (thousand)	Growth by times
Cervical	947,000(46)	1,072,000(51)	1.1	1,120,000(54)	1,052,000(49)	1.0
Breast	231,000(93)	479,000(92)	2.1	16,000(7)	20,000(8)	1.3
Colorectal	38,000(13)	615,000(62)	16.2	256,000(87)	383,000(38)	1.5
Oral	73,000(14)	321,000(42)	4.4	449,000(86)	440,000 (58)	1.0
合計	1,189,000(41)	2,515,000(57)	2.0	1,841,000(59)	1,899,000(43)	1.0

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The Growth of Screening Services and Cancers Detected in Subsidized Hospitals

Cancer Type	Year	No. of Screening (in 10,000)	No. of Positive Cases	No. of Cancers Detected
Cervical	2009	94.7	26,245	cancer 2,833 pre-cancer 5,278
	2010	107.2	27,278	cancer 2,840 pre-cancer 5,899
Breast	2009	23.1	22,147	957
	2010	50.7	48,973	2,406
Colorectal	2009	3.8	1,375	cancer 44 Polyps 577
	2010	61.5	45,344	cancer 1,362 Polyps 13,416
Oral	2009	7.3	2,337	cancer 512 pre-cancer 1,297
	2010	32.1	34,254	cancer 1,401 pre-cancer 1,692
Total	2009	128.9	52,104	cancer 4,346 pre-cancer 7,175
	2010	251.5	155,849	cancer 6,805 pre-cancer 11,007

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The Outcome of Cancer Screening Program in 2010

Cancer Type	No. Achieved in 2009 (10,000)	Target No. in 2010 (10,000)	No. Achieved in 2010 (10,000)	Rate Achieved in 2010 (%)	No. of Cancers Estimated in 2010	No. of Cancers Detected in 2010	No. of Cancers Detected in 2009
Cervical	195	204	212	104	cancer 6,100 pre-cancer 22,900	cancer 4,744 pre-cancer 10,334	cancer 5,158 pre-cancer 9,669
Breast	24	40	52.7	132	cancer 2,000	cancer 2,478	cancer 1,004
Colorectal	29	100	99.8	99.8	cancer 3,000 Polyps 33,000	cancer 1,994 Polyps20,493	cancer 361 Polyps 5,478
Oral	53	68	76.1	112	cancer 2,000 pre-cancer 2,700	cancer 1,541 pre-cancer 2,038	cancer 718 pre-cancer 2,845
Total	301	412	440.6	107	cancer 13,100 pre-cancer 58,600	cancer 10,757 pre-cancer 32,865	cancer 7,241 pre-cancer 17,992

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The Percentage Difference of Early Cancers between Screening Detected and Cancer Registry

Cancer type	Percentage of Stage 0+I		
	Detected by Screening	Cancer Registry**	Difference
Cervical*	91	85	6
Breast***	62	37	25
Oral*	35	20	15
Colorectal*	52	19	33

Source :
*2008 Screening Data
**2004 Registered Cancer
***2010 Screening Data

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Stage Specific 5-year Survival Rate

	Stage					
	0	I	II	III	IV	Overall
Cervix	96	88	64	53	23	88
Breast	97	95	89	70	21	85
Oral	80	76	68	52	33	51
Colorectal	86	81	72	57	12	56

Source : 2004-2008 Cancer Registry

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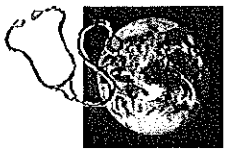
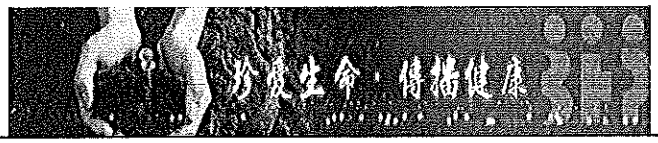
Cherishing Lives, Promoting Health...





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附件五：APEC 衛生政策論壇問答摘要紀錄

Detecting Disease
Breakout Session
17 September 2011
Meeting Notes

Harry GE Healthcare, Malaysia
Manny, startup point of care diagnostic, San Jose
Shu-ti Chiou Chinese Tpe, familiy doctor, MOH, DG bureau health promotion
Ed Abbott

How can stakeholders work together to accomplish better strategies for early detection/prevention?
Cardiovascular

- Chiou: her bureau in charge of detecting chronic disease, inc cancer & cardiovascular; maternal checkup; young child checkup; general checkup for adults. Checkups include chronic disease testing. In Ch Taipei: 40-64 get free general checkup every 3 years. 65+ free checkup every year.
- In Ch Tpe: Level of undetected hypertension 40% diabetes 35% (from national survey every 4 years; random sampling)
- Audience: Biggest health outcome from smallest cost: hypertension
- Expensive to detect cardiovasc disease; cheaper to detect hypertension
- Ch Tpe: 7-11 can provide checkup for body weight, height, blood pressure. You can check bp when shopping at 7-11. holiday activities, have ability to check blood glucose, bp; big buildings also have venues for easy checkup
- Hong Kong: working in public care office. Working twds clinical guidelines, std reference for doctors & hc providers. Ch Tpe have clinical guidelines to ensure quality of care? Patient empowerment: what is role of patient? After detection, management depends on patient.
- Ch Tpe: do have national guidelines for detection and mgt. considering implement quality monitoring program for hypertension. Previously did not have rpt of blood pressure in national data. Seeking to get doctors to include this measurement in reports.
- US : preeclampsia = sig. cause of death. High bp is one sign (protein in urine another). Main reason this is such a high cause of death is b/c women not screened for high bp. Need to rethink bp screening across the board. Look at stakeholders, people, health workers, medical model. We heard Philippines minister; Indonesia would say same thing. Healthcare

workers are midwives. Cmty healthcare workers are key. What can they do? Many clinics don't even have cuffs. New ways to detect bp without stethoscope. Make sure that health workers are taught about high bp when learning. Next pieces – even when we find it – when you have a cuff in rural Indonesia – when you've detected it, is there a person who knows what to do with that high bp reading.

- Abbott: tech innov piece is to make it easier to read high bp. Companies can play a part. We are not forcing people to come to these detection opportunities. Some ppl don't like to go to doctors. How can we reach these ppl and get them to come forward for detection.
- US: malaria detection example. Maternal malaria detection has made advances. Use those lessons to build and generate demand. Look at care that can be done at each level. Models are out there for cervical cancer screening; HIV/AIDs. Don't need to reinvent.
- Thailand: universal coverage system. Early detection needs to be appropriate and achievable. Concerned: colon cancer. Detection in feces. Too late to detect. But that is available. Cheapest one is $2/test. 20 million ppl over 50 in Thailand. Test once/year. Must be affordable.
- Cardiovascular: don't have to buy tests. Do need equipment. But don't need to pay for tests. Relatively cheap to treat patients for hypertension. Cheap drugs are available. Bad thing is you have to take drugs for entire life. Need to keep up with patients to make sure they keep taking meds.
- In low- to middle- income countries, Cardiovascular disease is by far the biggest problem. 2-3 times the killer than cancer is.
- Get best return on money, save most lives: effective strategies for detecting hypertension and treating could make huge difference
- Each economy must identify its most urgent needs
- China and India = cardiovascular disease is much greater than cancer
- Congratulate on colorectal cancer. Cost to detect is cheap. Can detect polyps as well. Can be easily removed by colonoscopy. Does not cost much and can prevent cancer.

Cancer

- Cancer is a more complex problem. Fecal blood testing. Interference, false positives can create uncessary follow-ups.
- Ch Tpe: Need to prove that by data, scientific evidence
- we have seen it reduce cases 2-3 times
- cervical cancer screening; outstanding, fantastic results; no doubt about the effectiveness

- US: only difference – Thailand is one of the best examples of country that went beyond pap smear – Thailand paved the way to now with single-visit approach – they have screened thousands of women, trained doctors, providers, and are teaching other economies. They have pap smear plus single visit for those women who cannot take advantage of that.
- Cervical cancer is not a great killer; let's look at lung cancer
- How effective are our detection strategies for lung cancer
- Ch Tpe: local CT can detect early. Too expensive. Do we want to reassure smokers, you can continue to smoke, we will provide free CT.
- Abbott: GE is leader in imaging technologies for detecting lung cancer. No country can afford to screen entire vulnerable population with CT tech. are there other alternatives?
- ChTpe: Currently only available advance is for heavy smokers to have the benefit. Are providing smoking cessation services. Better. Prevents cancer & cardovasc disease, respiratory disease. And prevents the cardiovasc, respiratory for others (second-hand smoke)
- Audience (Aus? UK?): wasting time detecting lung cancer if you don't have smoking cessation program
- General agreement that this is true but politically untenable
- Screening of population must focus on high risk groups but also look into the cause of the disease, focus efforts there. Training of proper personnel in detection and treatment vital
- Aus Economist: add detection, creates more demand for health services. Have you evaluated that in national insurance scheme – balance cost and benefit?
- Ch Tpe: screening encourages more utlilization. See presentation. We need to be sure we have infrastructure for diagnosis and treatment. See page 6. did calculate level of resources and ensure that enough are available to treat and follow up
- Breast, cervical, colorectal, oral cavity all decided to be cost effective for mass screening; is cost-effective to focus on high-risk populations. But can miss people if define that popul. too narrowly; example: breast cancer – family tree only accounts for 20% of cases
- Thailand: cervical cancer model: Thailand blessed with nemon force (?); association worked with health volunteers already in place; good model. Pap smear not the best. Working on new detection. Oral mucosa. Other easier ways. Tell women it is easier, encourage them to come in. for treatment, follow-up, vital to have trained healthcare workers. Need to treat babies within a few weeks.

- Gates fdtn: focus on communicable. Looking for synergies. It does come down to education and raising awareness. Test messaging. Momma (?) program. Preeclampsia important. Use existing programs to include education about cervical cancer and other priorities. look at ways to use existing models to add value with very little added cost.
- Thailand: stress to industry: it needs to be cheap. Pyroxene level. Use imported technology, $10/test. Within country $2.50/test. Universal coverage can cover that.
- Abbott: challenge for industry, to be frank, not all techs available to do screening are effective. Need to improve efficacy. Other is cost itself. Tests that cost $10 or $20 per patient or expensive equipment that needs advanced lab – they are not appropriate.
- Even a cheap test can waste a lot of money.
- Aus: universal chest x-ray for detecting TB. Waste of money.
- Another example: PSA
- Hong Kong: Eye disease; retinal camera very affordable; look at that

Diabetes

- Diabetes another complicated area
- 2003 WHO report: doing screening for type II diabetes. No evidence that screening improves outcomes. "Logic suggests it may be good."
- Where are we today in understanding for type II diabetes – are screening programs effective? What are benefits for system.
- Ch Tpe: retina is cost-effective. Checking blood sugar – it is true, it takes too long; cannot prove that there is benefit. Early intervention can prevent progress of high blood sugar to turn into diabetes. Trying to screen for risk of diabetes by measuring BMI and focus screening on that population.
- Do we also need to encourage people to eat better and lose weight, such as the lung cancer example?
- Need to study that. Lung cancer is clear. This is less so.
- Manny: one of products working on is low-cost test for diabetes screening. Diabetes is spreading everywhere. MOL was diabetic and no one knew it. Used A-1c test. Showed high level. Went to hospital; blood sugar above 400. now managing her diabetes. A-1c test seems to be good indicator. Having access to this kind of test could make a difference. Accurate, low-cost, no refrigeration. See result in 3 minutes from finger stick.
- Ch tpe: sounds promising!

- HK: Go back to population screening for diabetes. Retinal screening very effective, low-cost. Hoping this model can improve access for patients.
- J&J is partner with govt to do diabetes screening, patient education. Can do better: improve coordination among stakeholders, including within govt, i.e. MOH and insurance ministry. Great product may not get insurance coverage. Ex: Monitoring blood glucose level important for diabetics, but test strips not covered by insurance.

What role can mobile technologies play in addressing these issues? Especially in lower-income countries. Download data to mobile phone, share throughout system.

- GE: one of programs embarking on in Malaysia. Cardiovasc disease #1 killer . industry can work with govt in early health, detection. GE has pocket ultrasound, v-scan. Supposed to replace stethoscope (but probably won't due to price gap). Access to specialists often limited. Pretty good public health system in Malayia. 24,000 clinics throughout country. Access to specialists limited. Use clinics to train workers to do first level readings, exam. System to transmit results back to cardiac centers spread throughout country. Cardiologist can decide whether patient needs to move to more advanced care environment or be treated locally.
- MRI, CT scan difficult to afford. 150 hospitals in Malaysia. Less than 1/3 have those machines. We have in-house radiologists in 37 of the hospitals. Access to imaging services is limited and costly. Private sector working with govt to link up all the radiologists in country. They stay where they are. Use tech to send, share info. Half of radiologists in private sector, half in private sector. Go to public hospital for CT scan: waitlist 4-8 months. 1) lack of equipment; 2) lack of radiologists. Addressing it through this linkage plan and load balance strategy. 98% of hc costs born by govt. 1rinngit (30 cents) buys outpatient treatment. Linkage plan does not distinguish betwn private and public radiologists; all linked together. Load balance outsources public cases to private center.
- Hong Kong: 90% of services provided by public sector. Same problem. Try to get private radiologists involved.
- Electronic health record very important for sharing info, creating economies of scale. Many hcps are single providers. Trying to set up community health centers, link them up with technology.
- Thailand: fifth year of universal coverage. Electronic data is financial only. Clinical data is there for entire country but not retrievable. Lesson

learned from Thailand: set up way to share all data. Not sure why not done – not thought of? Too expensive? But hampers improvement of system, analysis of results.

- Ch tpe: national health insurance card. Her office works with national health service to store all info. But can only store test results for one year.
- Gates Fdtn: Singapore has good info from e-prescriptions. Lower tech solutions. Japan. Indonesia has maternal health program that uses low tech to educate.
- Ch tpe: pregnant women, diabetics have passport that contains all info from testing, treatment, etc.
- China: health record for general population from 2005; expand early screening detection for 65+ population for cancer, inc liver, cervical, breast; for 65+ population health check every year; over 65 early screening for diabetes, hypertension
- Electronic records at natl level would be effective. Not sure if it would provide cost-savings. Take country and test it. Singapore or Switzerland.
- Singapore's about to roll it out. Sarah Muttit, who runs it, is here in another session. Let's ask her. Not sure they are including cost-effectiveness criteria; should encourage them to do so.
- Many deaths in healthcare system are caused by mismanagement of patients. Medications improperly dispensed or react with other medications.
- China: huge task of healthcare reform. Needs great encouragement. Ch govt trying to provide healthcare to everyone. In SH very comprehensive hc system. Hc clinic; can walk to one in 15 minutes wherever you are in SH. Station in each cmty with free education and basic hc exam – height, weight, blood pressure. If you have disease – hypertension, diabetes – local doctor/hcp will track your progress and follow up. Free screening to population for cancer.
- China has same kind of national insurance card for every citizen

Convincing stakeholders and public of value of early intervention and detection. What should be promoted as valuable? What could we do better to promote value?

- HK: must look at financial systems. More emphasis on preventive care may be valuable. Trying social marketing approach; in workplace; also engage community to engage in these programs.
- What works best?
- HK: Bottom up approach. Involve community. Media programs imp for general awareness but more targeted approach is more sustainable to raise awareness, change behavior at the community level. Healthy cities

project w/ NGOs . start w/ communities. Community diagnosis. Understand needs of particular cmty. Engage politicians; in HK it is district councils. DC and cmty leaders are trying to work with different sectors to promote specific solutions for cmty.

- Ch Tpe: be sure to do it in a systematic way. In a population-best way. Hypertension, diabetes, cancer – disadvantaged groups most at risk. But they may not be reached by typical media outreach.
- Gates Fdtn: awareness critical, very important. Last night's speech in Malaysia: imp of having integrated approach. Ppl who access healthcare, tell them what they need. Ppl may not have awareness to take action, ask for more. Medical professionals on the front lines need to be proactive and educate.
- Ch Tpe: see presentation. We are doing that now. 98% of Twn popul access hc within one year. Use those visits to do complete screening. Use hospitals, clinics to promote healthcare.