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| • 計畫中文名稱 | 兒童暴露參數先驅計畫 | | |
| • 計畫英文名稱 | Planning and analysis for Taiwan Child-Specific Exposure Factors Handbook | | |
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| • 研究人員 | 陳重信,潘文涵,簡伶朱 | | |
| • 中文關鍵字 | 暴露值；嬰兒；幼兒；暴露參數；兒童政策；風險評估；； | | |
| • 英文關鍵字 | Exposure factor；infant；toddler；dietary；non-dietary；children；climate；environment | | |
| • 中文摘要 | 背景說明：國健局自 96 年起建立「台灣一般民眾暴露參數彙編」，但兒童與成年人所暴露之環境生理、行爲有差異，美國環境保護署已針對兒童編制「兒童暴露參數手冊」，台灣目前與暴露有關之調查研究，仍以成年人或青少年以上者爲主，在「建立本國暴露評估參數資料庫」的報告中指出與嬰幼兒有關之暴露參數資料仍極度缺乏，建議宜積極收集。我國目前雖然有許多研究可提供兒童飲食暴露等相關暴露參數，但尚未具備相關初生兒、嬰兒、幼兒暴露因子及參數之資料庫，尚待統合彙整以及補充欠缺不足的部份，且由於地域、生活習慣、文化背景、人種及人體生理之差異，亦不適合直接引用國外數據進行評估，故亟需建立本土化暴露參數，以便研發尤其 3 歲以下嬰幼兒童之風險評估機制。 研究目的：進行跨領域、跨部會合作以及統合彙整相關資料，以研擬未來執行台灣兒童暴露參數彙編相關內容及優先順序。先驅計畫內容應包括對國內、外相關研究及參考文獻之彙整，並對欠缺或應建立本土資料的部份、相關單位分工之工作內容、經費預估等項目及優先順序提出建議。擬透過跨領域及國際性跨國研究，建置台灣本土化嬰幼兒基本資料，做爲台灣未來推動決策科學研究、風險管理論述及環境衛生醫療實用基礎之參考。 研究材料與方法：本計畫工作項目包括(一)蒐集、整理、評估與分析國內、外（例如：美國、日本）現有文獻或資料庫資料，並聯繫相關單位與研究者收集參數資料。根據兒童常見的健康危害、暴露危害途徑、與生活特質，建立台灣本土化的兒童健康風險評估所需之暴露參數資料。(二)第二年持續蒐集與彙整國內、外相關資料及研究，並定期更新兒童暴露參數資料庫。(三)規劃未來參與兒童暴露參數相關工作之部會(例如：中央研究院、國家衛生研究院、衛生署食品處、環保署、國民健康局等)及擬定跨部會合作之綱要計畫，內容包括執行目標、策略方向、各部會之具體工作內容及擬定計劃執行進度和初步經費預估等，並邀集上述相關單位辦理至少 2 場以上跨部會之討論會議，以研商該計畫執行之可行性，及相關合作事宜。（四）依據第一年擬定之調查設計方式，進行研究樣本的收集與資料分析，所調查之對象包括 3 歲(含)以上至 6 歲(含)以下、及 2 歲(含)以下兩種不同年齡層之兒童。 預 | | |

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| | 期成果：提供本國兒童健康相關政策決策單位目前台灣欠缺的暴露參數資訊及將來研究方針及方法，做爲台灣未來推動決策科學研究 (Decision Science)、風險管理論述及實用基礎之參考。 |
| • 英文摘要 | In 2008 the United States Environmental Protection Agency (EPA) stated, “The Goal of the Child-Specific Exposure Factors Handbook is to consolidate all child exposure data into one single document. This document would provide a summary of the available and up-to-date statistical data on various factors assessing child exposures. These factors include drinking water consumption, soil ingestion and non-dietary factors, inhalation rates, dermal factors including skin area and soil adherence factors, consumption of fruits and vegetables, fishes, meats, dairy products, homegrown foods, human milk, activity patterns, body weight, and consumer products.” (US EPA, 2008 Child-Specific Exposure Factors Handbook) In Taiwan, the lack of consolidated data, such as child-specific exposure factors for infants and toddlers, will limit the quality of child health related risk assessment and hinder the development and implementation of national child health policy. A consolidated handbook of all child exposure data is critical to policy makers, risk managers, and risk assessors on implementing child-specific policies, laws and regulations. Due to differences in environment, ethnic makeup, diet, and cultural practices between young age Taiwanese children and children in North and South America,, this study is critical in dictating the development of appropriate risk assessment processes in Taiwan. Studies have indicated that extreme climates, such as Taiwan’s tropical monsoon climate, as well as nutritional issues, may affect the health and may alter the growing pattern of the regional population. No data is currently available on the impact of extreme climate change and related diseases on young age children. The planning and analysis for the Taiwan Child-Specific Exposure Factors Handbook will be used in comparison to other international studies, including Japan and Korea, on scale, scope, and depth of child-specific policies. The handbook will also provide essential information that will guide policy makers to identify and prioritize investigation and research on critical child-specific exposure factors. For instance, since infants and toddlers are considered “high risk” to the effects of environmental pollutants and temperatures, this planning and analysis study will help risk assessors understand the impact on child health from exposure factors occurring during normal child behavior and daily activities, such as dietary and non-dietary habits and, environmental contaminants. The goal of this study is to consolidate and develop a comprehensive handbook inclusive of results on child-specific exposure factors from credited studies, including those of various governmental bodies such as DOH, BHP, NSC, EPA, NHRI, Academia Sinica and research institutes. |