Evaluate the Effectiveness of Systematic Solution to the Capacity Building of HCPs’ Diabetes care in Melanesian Countries

Chia-Lun Lee
Kaohsiung Medical University Hospital (KMUH), Taiwan

Demographics of SI

- Solomon Islands (SI) is a diverse country with more than 900 islands and 70 language groups
- In 2009 census from WHO
  - The population was 515,870
  - The median age was 19.7 years
    - 54% of the population aged 15-59 years
    - only 5% aged 60 or older

Health Situation of SI

- Communicable diseases
  - Clinical Malaria and fever accounted for 28% of acute care attendances
- Non-communicable diseases (NCDs)
  - 46% at high risk for NCDs
  - 67% overweight
  - 33% diabetes

Background

- One of 2006-2015 National Health Strategies Plans of SI
  - To improve healthcare professional’s knowledge of diabetes care.
- National Health Strategic Plan 2011-2015 reflect
  - The growing significance of NCDs
  - The need to focus on whole-of-government approaches to health promotion and disease prevention.
- Taiwan collaborated with SI to achieve this national plan since 2009.
The Health Collaboration between Taiwan and SI

• National Referral Hospital (NRH) Project
  – 1989-1993 NRH Expanding Project: Phase I & II
  – 1994-2004 NRH renovations Project
  – 2005-2006 NRH Expanding Project: Phase III
• 2006
  – NRH and KMUH sister-hood relationship project
  – Taiwan Mobile Medical Mission Service
• 2007
  – Medical Personnel’s Capacity Rebuilding Project
  – Taiwan Health Center (THC) in SI project
• 2008: Taiwan Scholarship project on health field

Aim

• To evaluate the results of 4-year diabetic educators training program in this Melanesian country
• NCDs prevention: Seed Teacher Training Program for Type 2 Diabetes Mellitus

Materials and Methods

• Designer
  – KMUH, THC and SI Ministry of Health
• Concept
  – A Six-Step Approach to Curriculum Development
• Pre- & Post-Trained Effectiveness Assessment
  – 20-item Structural questionnaires
  – Feedback List
  – Modified Clinic's Clinical Teaching Effectiveness Instrument (Copeland & Hewson, 2000)
• Statistical method
  – Paired t-test was used to evaluate the training effectiveness
A Six-Step Approach to Curriculum Development

Step 1: Problem Identification and General Needs Assessment
- The health care problem
  - Rising NCDs risk, type 2 diabetes would be addressed by the curriculum
  - Affect HCPs and the people in SI
- Current approach: without appropriate and update textbook or materials
- Available resources
  - Leader of Taiwan Health Center
  - Meetings of experts: Medical Doctor, Certified Diabetic Educator, Dietitians etc. to create the textbook for local staffs using.

Step 2: Needs Assessment for Targeted Learners
- Targeted learners: HCPs in Honiara
- What information is unknown?
  - Equipment
  - Basic knowledge of the targeted learners
  - Attitude about the training program
  - Favorite pattern of the training program
- Methods to obtain the most important information
  - Keep contact with leader in THC to identify the arrangement of program about time, personnel, supplies, space etc.

Step 3 Goals and Objectives
- Goals and objectives
  - To provide a basic understanding of diabetes
  - To advance patient-centered medical care knowledge and self-management skill
  - To emphasize the importance of maintaining balanced diet and healthy lifestyle for metabolic control
- Prepare attendees to become clinical or community diabetic educators
Step 4 Educational Strategies

- **Lectures and discussion**
  - For update knowledge

- **Video watching, demonstration and feedback on performance**
  - For clinical skills, like insulin injection or food plate with food models

- **Small group discussion and learning projects**
  - For posters manufacture

Step 5 Implementation

- **2009 & 2010**
  - 4-day intensive and interactive workshop for basic patient care and medical knowledge, medical nutrition therapy and diet management of DM
  - Diabetes-related posters and education material designs and presentations

- **2011**
  - The first Micro Fun Project: two experts from KMUH and nine local teachers involved in two workshops
  - Teaching material: Diabetes patient education booklet
  - Round table discussion

- **2012**
  - The second Micro Fun Project: three experts from KMUH and three local teachers involved

Step 6 Evaluation and Feedback

- **Significant Improvement**
  - 170 health workers were trained in 2009-2012. The average scores of pretest and posttest were statistically significant improved (42.1 to 64.6).
**Step 6 Evaluation and Feedback**

- **Satisfaction**
  - Over 90% of them reported satisfied with the training program strongly, especially hands-on practice based learning.

- **Teaching Effectiveness**
  - 12 seed HCPs were scored into “often or always teaching effectiveness” (rating 4~5) by using modified Cleveland Clinic's Clinical Teaching Effectiveness Instrument.

- **Customized Booklet and Posters**

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**Conclusion and Suggestion**

- **Conclusion**
  - Customized diabetic educator training program for this developing country, it showed a positive effect and fitted the needs of HCPs.

- **Suggestion**
  - At least two days to introduce health related knowledge and caring skills
  - Involve local HCPs into the teaching program
  - Invite training officers and NCD coordinators from other provinces to participant this kind of program to spread the model into all countries

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*Thank You for Your Attention*