The Effects of The Enhancement Re-Check Services Program for Those Who Have Been Screened As Abnormal for Their Liver Function Examination

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Learning objectives: The learner will be able-

- To understand the reasons about not willing to do follow-up visit from those who have been diagnosed as abnormal liver function
- To gain the strategies about health promotion for the subjects with abnormal liver function.

Conflict of interest: None.

Have employer and whether any sponsorship or commercial support: None.
Outline

• Background
• Purpose
• Method
• Results
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Background
With improved standard of living and advances in medical technology, the average life expectancy of Taiwanese is 80.02 years (Ministry of Interior, 2014).

Most of the top ten leading causes of death are chronic diseases as opposed acute infectious diseases in the past.

Chronic liver disease causes the top eighth killer in Taiwan; approximately 4,975 people died of chronic liver diseases in Taiwan every year. (Ministry of Health and Welfare, 2014)
Chronic diseases and preventive health services for adults (2/2)

- Chronic conditions are not easy to be diagnosed, screened and checked up are necessary.
  (Eliopoulos, Gallagher, Blake, Dawson, & Young, 1999)
- Since 1996, Health Promotion Administration in Taiwan began promoting free health examination for adults above age 40 that services have been covered by National Health Insurance (NHI).
- Taiwan residents aged 40 and over receive free physical examination, renal function tests, liver function and blood sugar and other biochemical tests checkups in designated hospitals or clinics every 1 year or 3 years.
  (Lin, Ma, Yang, Chang, Yeh, 2009; Tsai, 2008)
The significance of follow-up visits for patient screened as having abnormal liver function (1/3)

- Chronic liver disease could at certain level be prevented. (Beverley, 2014)
- Screening for liver function could help identify liver diseases in early stage.
- The screening items include screening for Glutamyl Oxaloacetic Transaminase (GOT) and Glutamyl Pyrubic Transaminase (GPT), markers of liver dysfunction.
- In normal condition, GOT and GPT exist in liver cells but would be released and could be found in blood if the cells are damaged. (Tsai, Yei, 2011; Knight, 2005; Sakka, 2007)
The significance of follow-up visits for patient screened as having abnormal liver function (2/3)

- However, more than half of those with abnormal liver function results did not experience symptoms often neglected return for follow-up outpatient visits.

- As a result, abnormal liver function turned into chronic liver inflammation which could subsequently lead to liver cirrhosis or even liver cancer.
The significance of follow-up visits for patient screened as having abnormal liver function (3/3)

- Health promoting behaviors could guide individuals to comprehend their own health conditions and feel content and satisfied.
- If they understand their health condition, they are more likely to visit the hospital for follow-up examinations.
- Individuals should pursue their well-being by taking action instead of waiting until the disease break out.
  (Lin et al., 2007; Chen, Chang, Wang, Jian, Lin, 2008)
- Nursing staff should continuously provide enough information and improve patient satisfaction; and help potential patients become aware of their choices and the factors that could promote health.
  (Huang, 2006; Liu, Mio, Hu, 2011)
Purpose (1/2)

- This study focuses on adults who were screened as abnormal for liver function but did not return for follow-up visits.
- Plans and strategies were made to resolve problems in order to help the subjects take control of their health conditions and receive treatment if needed.
Purpose (2/2)

The main purposes of this study included:

1. Exploring the reasons and difficulties found among adults who were screened as having abnormal function in outpatient screening examinations but did not return for follow-up visits.

2. Figuring out the effectiveness of the project by comparing the rate change of follow-up visits before and after implementing the Enhancement Re-Check Services Program.
Methods

• Based on the purpose of this study, the design of evaluation study was used.

• Study subjects were chosen by purposive sampling method from whom participated in free live function screening from one hospital of outpatient clinic in the Southern Taiwan.

• The time period of this study was from October 2011 to April 2012.
The Intervention of this study

The content of this project was the following five steps:

- **Step 1**: To contact those who participated in free liver function screening and have been diagnosed as abnormal.
- **Step 2**: To confirm causes for them not return to receive follow-up visits.
- **Step 3**: To set up the case manager to consult subjects.
- **Step 4**: To arrange designated personnel to guide those are agree to follow-up.
- **Step 5**: To develop Hotlines to provide detail information and guidance.
Step 1: To contact those who participated in free liver function screening and have been diagnosed as abnormal

- The project first identified 166 subjects from computer database in November 2011.

- Telephone interviews were conducted to find out the obstacles stopping these subjects to miss out hospital visits.
Step 2: To confirm causes for them not return to receive follow-up visits

- 80% of the subjects indicated that they did not know the significance of the follow-up.
  - Lack of the awareness caused them become unwilling to or to neglect the follow-up visits.
- 12% of the subjects had revisited in other hospitals for follow-up visits.
- 5% of the subjects were unreachable due to lack of contact information.
- 2% resided in other counties or out of the country.
- 1% indicated that they could not go to the hospital because no family or friend could accompany them to the hospital.
Step 3-1: To set up the case manager to consult subjects (1/2)

1. The project assigned two community nurses to manage the cases, to find out the high risk group, and directly inform the subjects of their screening results.

2. They informed the subjects the importance of follow-up visits, and provided health education information such as counseling and help line in person or by mail.

3. If the subjects agreed to visit the hospital, nurses would provide assistance in making appointment.
Step 3-2: To set up the case manager to consult subjects (2/2)

- 4. They would make phone calls every 3 to 6 months to remind the subjects to go to the hospital and show their concerns.
- 5. For those who were not willing to go back to the hospital, case managers would call every other week to show their concern and to persuade the subjects to go back.
- 6. The case managers contacted the subjects who refused the follow-up visits at least five times before closing the cases.
Step 4: To arrange designated personnel to guide those who are agree to follow-up

- To help the subjects for their revisits, the project assigned personnel to assist the subjects to the outpatient rooms for physical check-up and consultation.
- Helpers would assist the subjects to the laboratory to complete recheck.
- Community nurse practitioners would then perform case management and provide care and services.
Step 5: To develop Hotlines to provide detailed information and guidance

- Special personnel were assigned and hotlines were set up to provide information.
- The service hours were 8 a.m. to noon, and 1 p.m. to 5 p.m. every Monday to Friday.
- The hotlines were toll-free telephone numbers.
**Outcome Evaluation**

- The evaluation outcomes of this intervention program were follow-up visits and subjects’ satisfaction.
  - The expected follow-up visits of program was set as the increasing rate from 47.3% to 60%.
  - The subjects’ satisfaction on services provided was a rise from 68.0% to 80.0%.
Results (1/2)

- Telephone interviews were conducted to understand why those who were screened as having abnormal liver function were unwilling to return to the hospital for follow-up visits.
  - The interview results indicated that subjects were not aware of the importance of follow-up visits.
- From January to March 2012, the project identified 341 subjects among 3,549 individuals who had received adult preventive care service.
Results (2/2)

- After the intervention of the project, among the 341 subjects, 231 returned to the hospital for follow-up visits.
  - The rate increased from 47.3% to 68.0%. (the increase was 20.7%), higher than the expected objective of the program

- The satisfaction on follow-up visits was measured by telephone interviews.
  - The overall satisfaction rose from 68.0% to 87.0% (increase rate was 19.0%), higher than the expected objective of program.
Conclusion (1/2)

- Chronic liver diseases and liver cirrhosis have been listed as top ten causes of death in Taiwan, and the screening examinations could help identify the diseases.
- Although some patients were aware of their abnormal liver condition after undergoing screening examination, they did not return to the hospital for follow-up visits because they didn’t experience any symptoms.
- Because of the lack of enough knowledge, they tended to neglect follow-up visits and delay the necessary treatment, and later their condition might develop into chronic liver diseases or even cancer, which is irreversible.
Conclusion (2/2)

• After the project was implemented, the professionals in the hospital worked together as a team and successfully improved the rate of return and boosted up overall satisfaction on the service.

• This program reaches the goal of preventing liver function deterioration by screening, diagnosing, and treating as earlier as possible.

• This program has a successful enhancement follow-up visits for those have been screened as abnormal liver function.
Reference-2


• Tsai, F-M. (2008). Physicians’ evaluation of adult health examination provided by National Health Insurance (Unpublished master’s thesis). Institute of Health Care Management, China Medical University, Taichung, City, Taiwan, ROC.

Thanks for your attention!