

The Development of 4Es Risk Score Application for Asthmatic Patients: The Preliminary Study

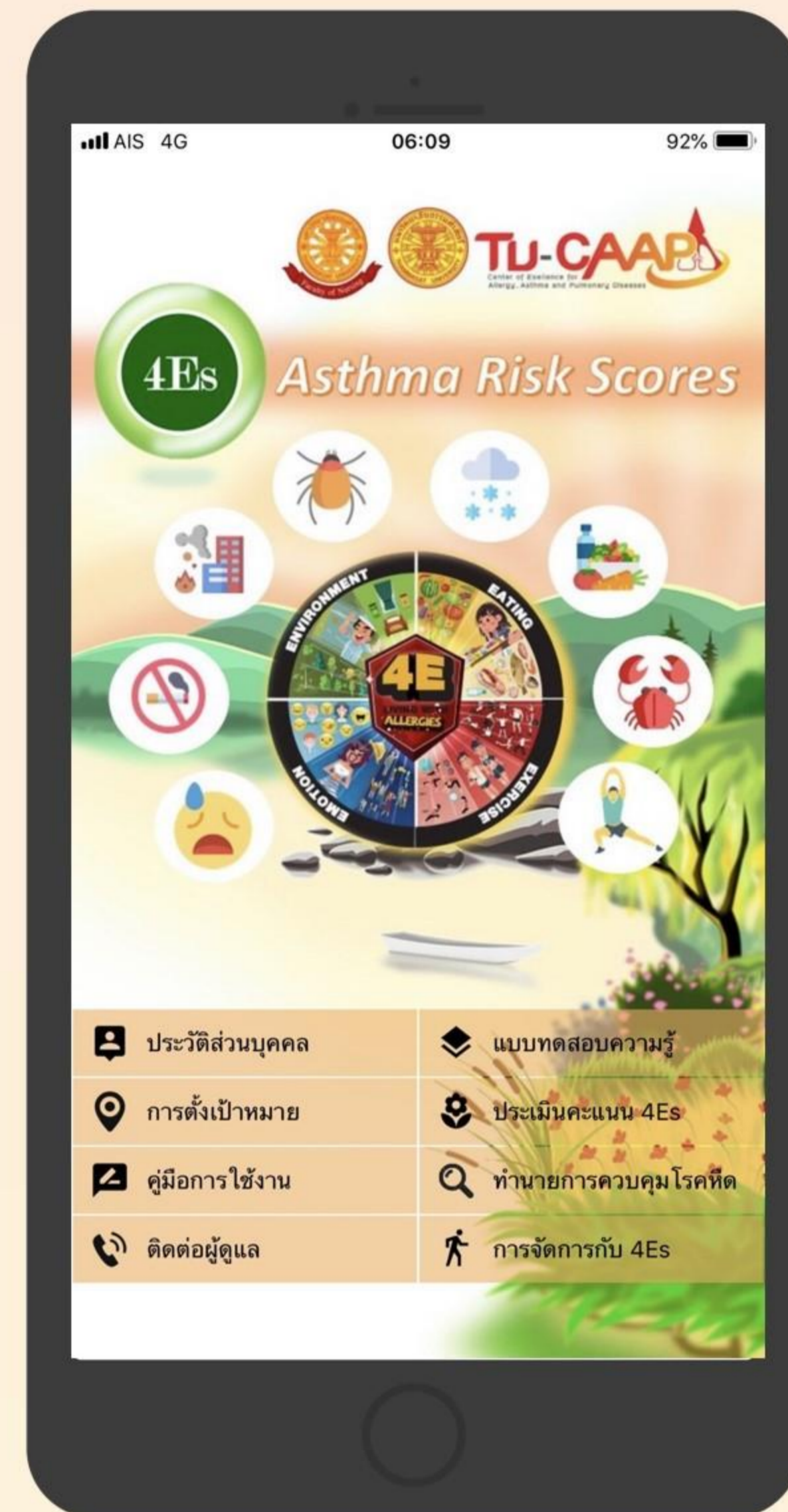
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Background: Promoting asthmatic patients to manage with four stimulating factors including environment, eating, exercise and emotion reveals a positive outcome in asthmatic control.

Objective: The development of the 4Es Asthma risk score application aimed to:
 1. Develop a tool to change inappropriate behaviors after known their risk scores. tool to evaluate risk and level of knowledge for self-management in risk
 2. Promote the patients to change inappropriate behaviors after known their risk scores.

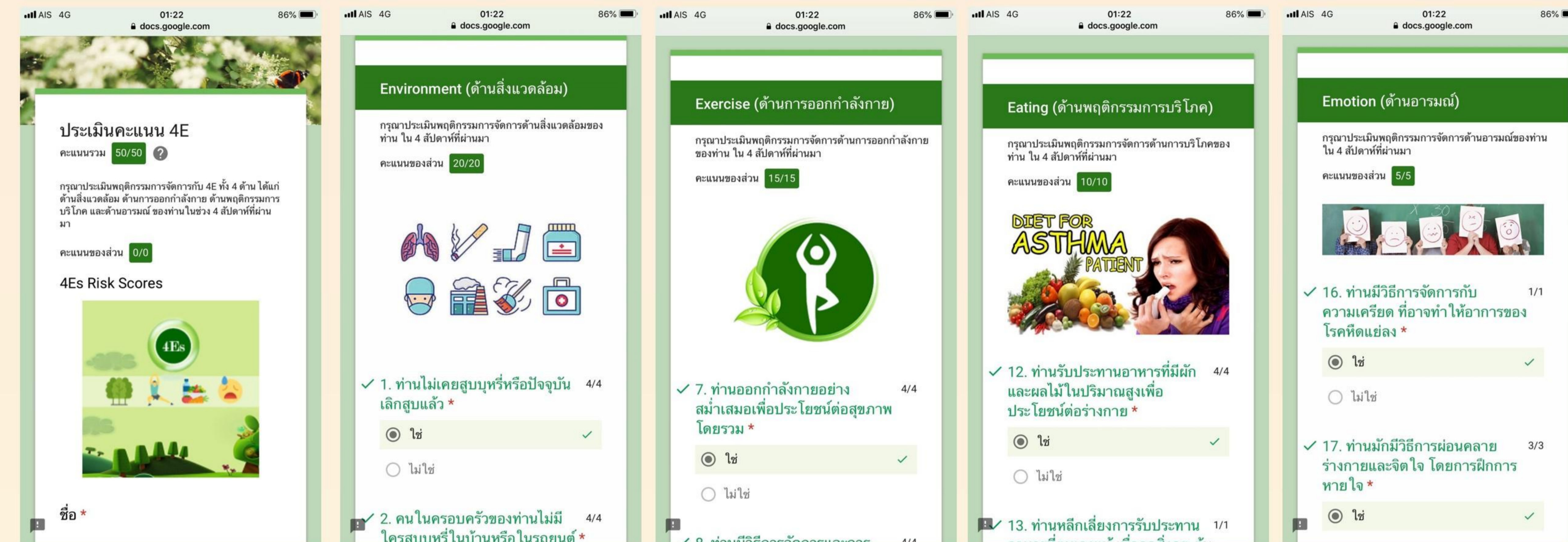
Methods:

1. Develop a tool to evaluate risk and level of knowledge for self-management in risk

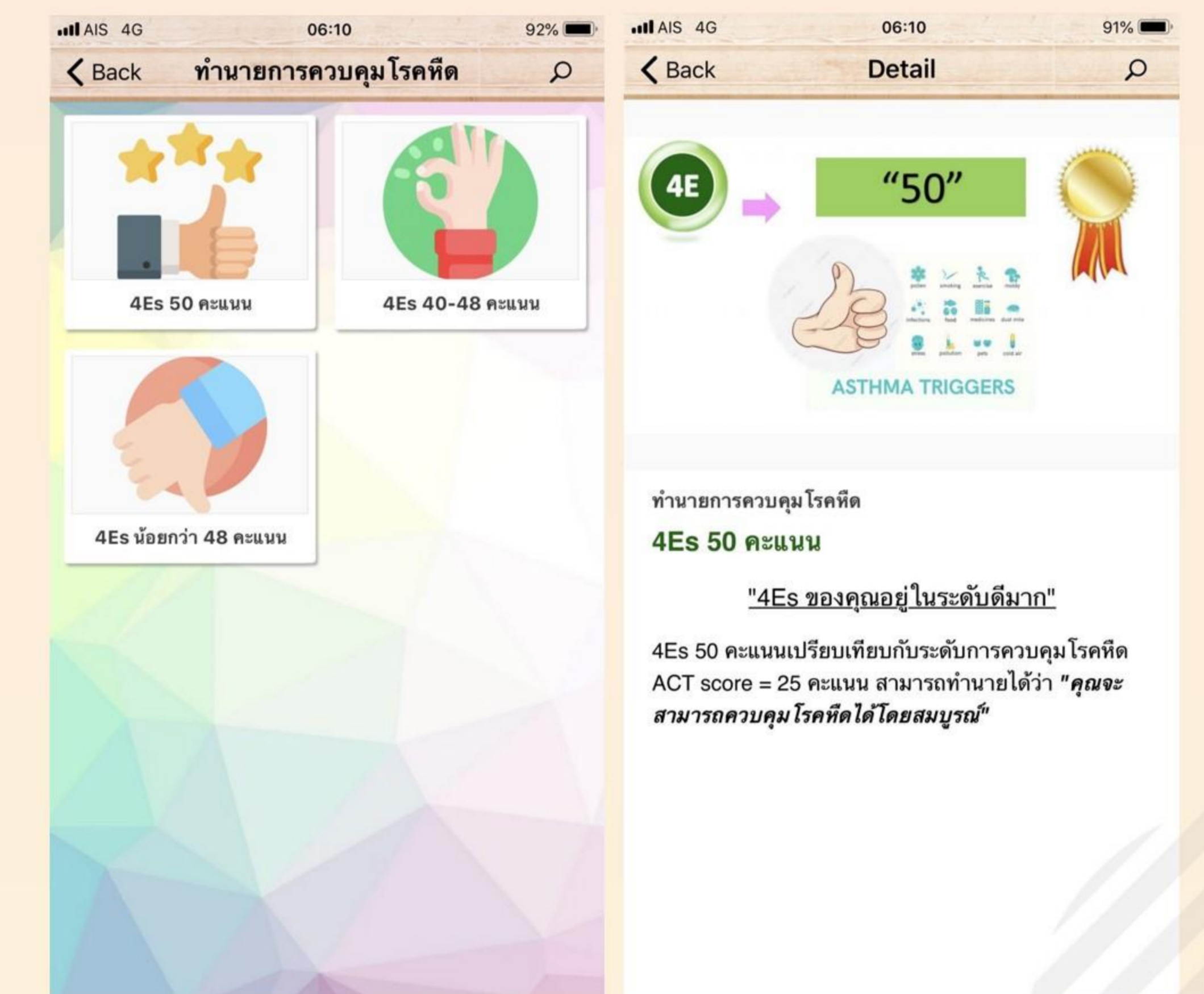


2. Promote the patients to change inappropriate behaviors after known their risk scores. Based on asthma risk scores, the Self-management was used to guide the strategy for managing asthma. This strategy has 6 processes including

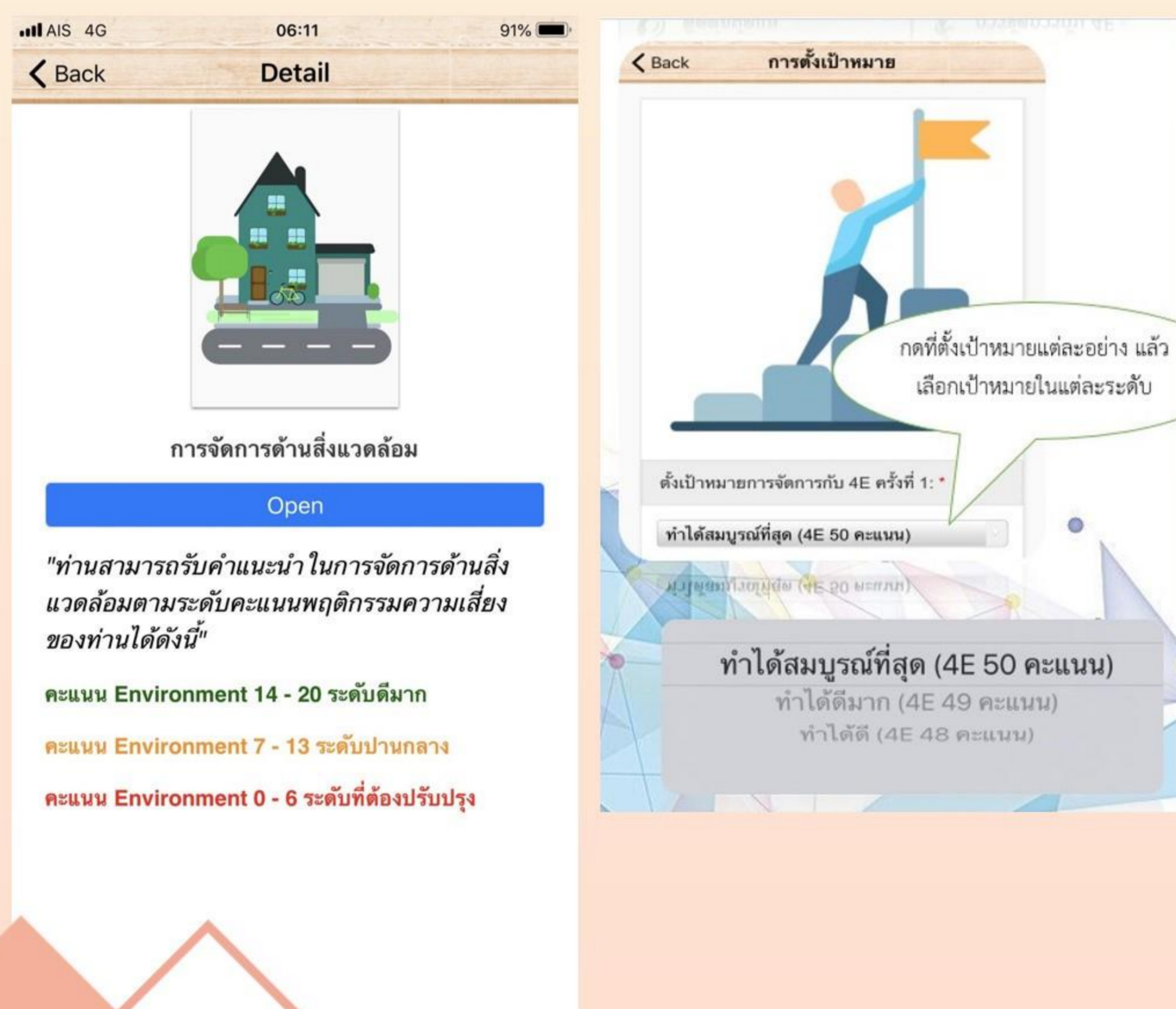
1) assessing the 4Es score



2) Comparing the 4Es score and the ACT score



3) Decides to change inappropriate behaviors
 4) Setting the goals in changing the behaviors



5) Starting to change the behaviors according to the E-book instruction



6) Evaluating after one week of changing the behaviors
 The 4Es Asthma Risk Score Application and the strategy for managing asthma were piloted with 15 asthmatic patients who visiting the Center of Excellence for Allergy, Asthma and Pulmonary Diseases, Thammasat University Hospital in June 2019.

Result: After the pilot completion, the satisfaction questionnaire covering 5 sub-scales: knowledge, appropriation, benefit, creation, and worthiness was used to assess among the 15 patients. The result showed that the average mean scores of overall satisfaction was an excellent level ($X = 21.60, SD=1.40$). However, to allow the older patients to access the application easier, there is a need to reduce the complexion in accessing the application. In addition, database platforms are needed for processing these data in country scale. In the era that the patients could access information easier, the development of application for promoting self-care for asthma control is necessary.

Conclusion: This application showed promise in giving knowledge, helping the patients to assess their symptoms, and promoting patients to change behaviors based on the 6 processes of self-management. Healthcare providers may implement the 4Es Asthma Risk Score Application and the strategy for managing asthma in other settings.