



Allergen Screening and Telephone Coaching Interventions to Prevent School-age Children at Risk of Developing Asthma

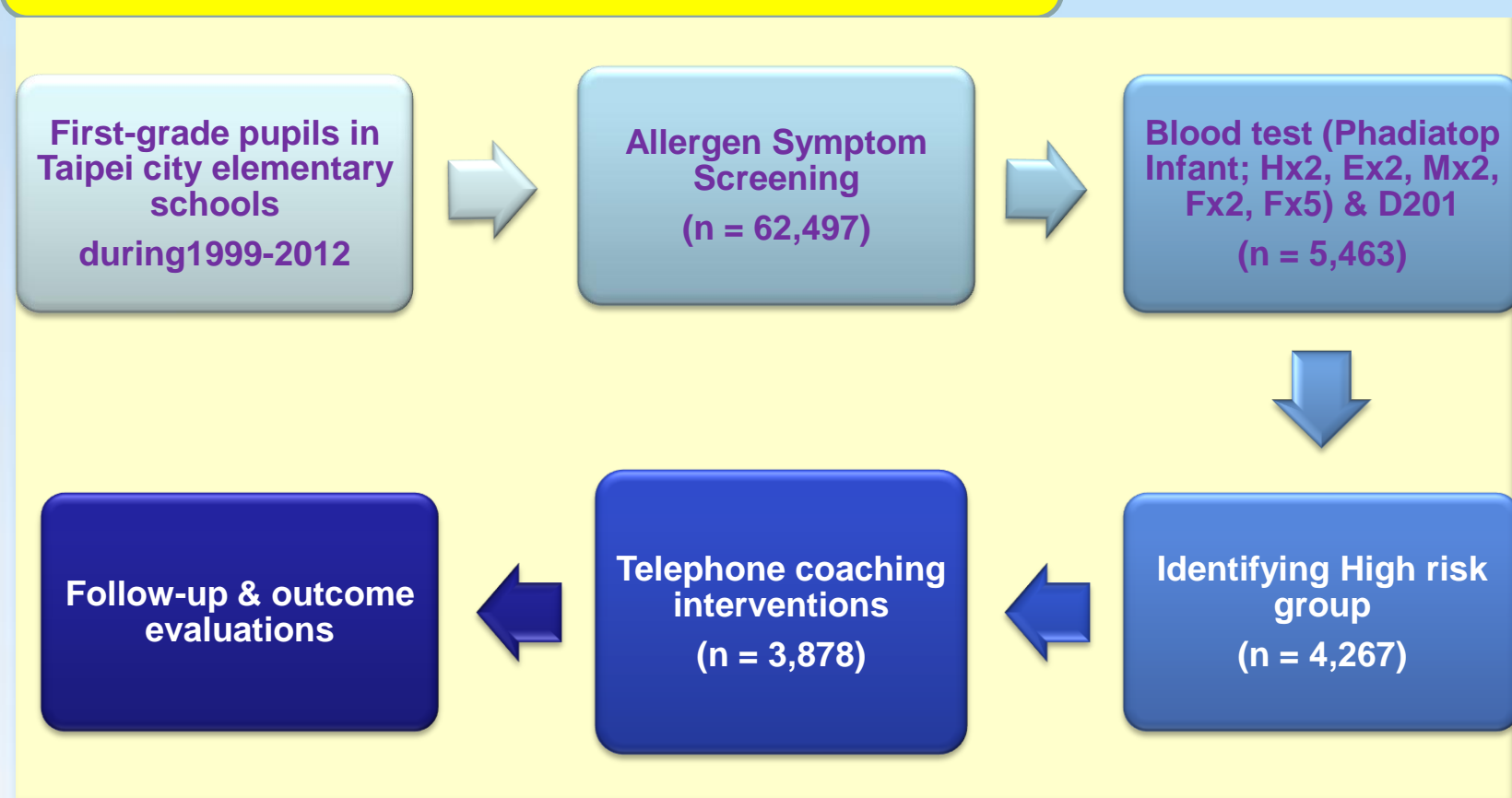
Bih-Shya Gau*, PhD, Yuan-Ju Liao**, PhC, Yu-Fen Tzeng*, MSN, Pei-Ching Liu*., PhC

*National Taiwan University, **National Yang-Ming University, #MacKay Medicine, Nursing and Management Junior College
Author contact: bsgau@ntu.edu.tw

Background and Purpose

Asthma is the most common chronic health condition for children globally, and the prevalence is increasing in Taiwan. According to surveys by the Department of Health, Taipei City Government, the prevalence of asthma among first graders was 20.74% in 2009. This project was aimed to have an evidence-based intervention program for children at risk of asthma.

Design, Settings and Participants



Identifying the Problems & intervention protocols

- Allergen screening profiles of first-grade pupils provided by Department of Health, Taipei City Government
- Standard interventions protocols established and piloted by Taiwan Association of Asthma Education

Conducting telephone coaching interventions

- Telephone coaches recruited from the qualified asthma educators and received trainings by Taiwan Association of Asthma Education
- Audits of the interventions done by Department of Health, Taipei City Government

Providing the continuous and dynamic feedback

- Answering questions and receiving feedback form the parents via the telephone network, and fill in diary
- Multi-disciplinary team approaches of the interventions; including pediatric immunologists, nurses, pharmacists, respiratory therapists

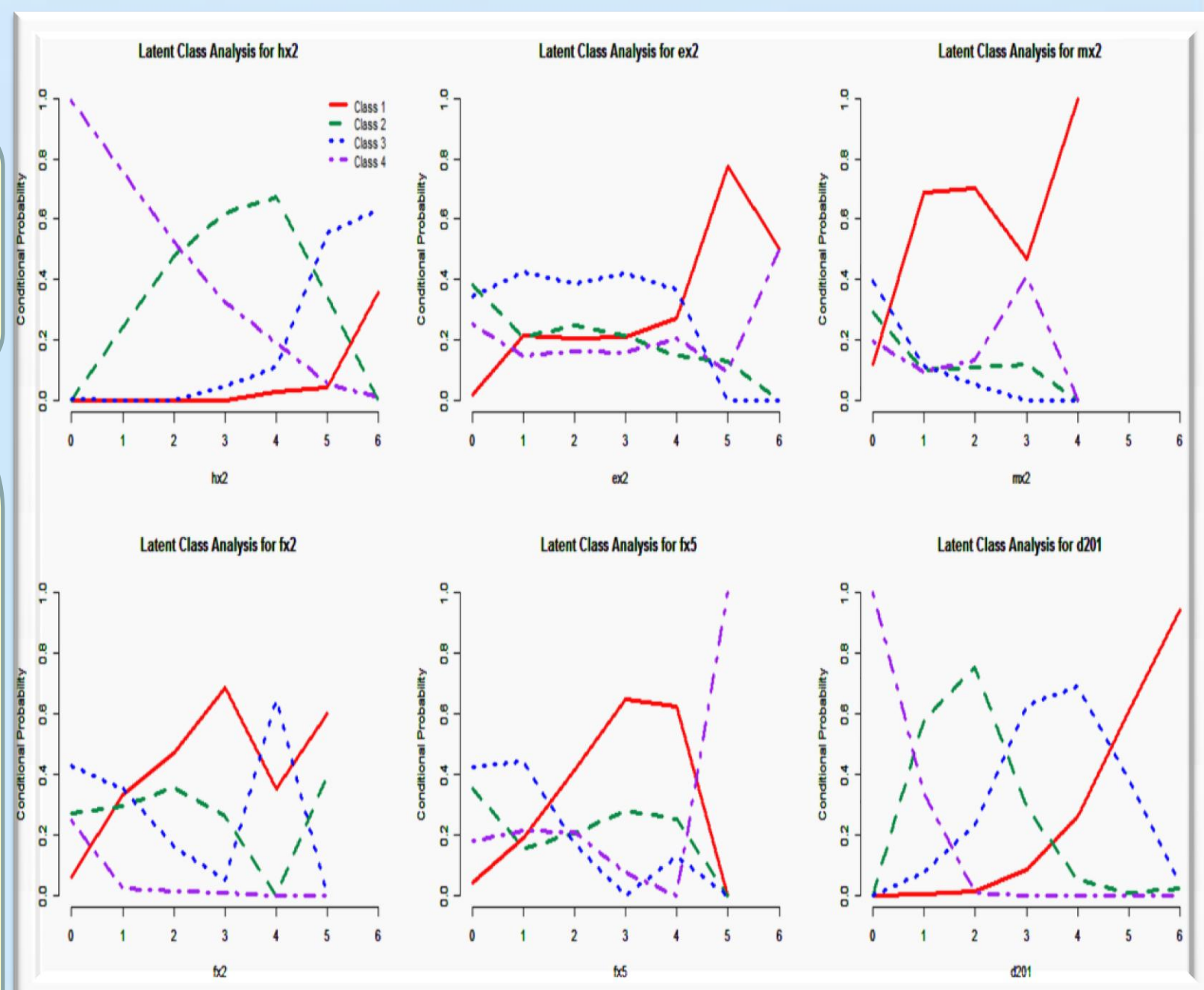
Conducting the follow-up and evaluations

- Providing parenting group and asthma care workshop
- Outcome evaluation included narrative feedback and structural questionnaire of asthma knowledge, asthma symptom control, adherence to asthma care, level of satisfaction to the interventions

Results

• House dust mites (dermatophagoides pteronyssinus & dermatophagoides farine), blomia tropicalis and hair of dogs/cats were reported to be the first three leading allergens for children.

- Mothers are the key recipients having the telephone coaching (68.5%).
- Major contents of the coaching included allergen prevention (70.8%), facets of allergy and asthma (60.4%), use of controller and rescue medicine (62.7%).
- Use of peak expiratory flow meter, prevention of exercise induced asthma and skills of using inhaler were insufficient for their self-management.
- Among the children, 5.3% experienced the ER visit in the past one year and 3.7% had school absences. Prevention of asthma exacerbation during sandstorm and cold wave were also discussed.
- In addition to adherence to asthma medicine, prevention of triggers, healthy eating and regular exercise were fully shared and reinforced during the telephone coaching process.
- Follow-up evaluation showed a high degree of satisfaction of telephone coaching and parenting group among parents, statistical significant reductions in ER rate ($p < .01$) and days of absence ($p < .05$) among schoolchildren.



Conclusions

The findings support “Asthma control-oriented asthma care” advocated by the Global Initiative for Asthma (GINA). Key elements of the telephone coaching consist of developing partnership between parents/children with asthma, identifying the triggers and reducing exposure to risk factors, empowering the asthma self-monitor and self-management efficacy, can enhance health outcomes and quality of life for children and their families.