Dear Colleagues,

On behalf of the Executive I would like to wish you all a very Merry Christmas and a happy New Year in this our last newsletter for 2005. Thank you for your important contributions to the ISAAC collaboration.

2005 has proven to be a most productive and busy year. We are in the final stages of preparing time trend papers for publication. The overview time trend paper for Phase Three has just been submitted to the Lancet for consideration and other papers will follow when their editorial decision has been made.

This year the ERS was held in Copenhagen on the 17-21st September 2005. Philippa Ellwood from the IIDC in Auckland reports back on the ISAAC collaborators function. A wonderful event enjoyed by all. –see photos later in the newsletter.

Our hearts go out to all who were involved in the earthquake disaster in Pakistan, our ISAAC collaborator Dr Naseer Mahmood from Karachi travelled to the affected area after the ERS to assist his people.

This year the ISAAC Steering Committee Meeting was held in Hong Kong and hosted by Professor Chris Lai (Regional Coordinator for Asia Pacific) and Dr Gary Wong (Principal Investigator for the ISAAC Hong Kong 13/14 year olds) This meeting was an extremely productive and successful meeting. A big thank you must go to Professor Lai and Dr Wong for hosting such a wonderful event and for sharing with us all, the beauty and diversity of their country. An update on the ISAAC programme will accompany the next newsletter due out in March 2006, - watch this space.

We would like to conclude by wishing you all a very happy Christmas and happy new year, with enough time to be able to enjoy your friends and family, enough energy to play, and enough space to be able to rejuvenate.

Warmest Wishes
Innes Asher

Professor Innes Asher ONZM
On behalf of the ISAAC International Data Centre and Steering Committee

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**NEWSLETTER CONTENTS**

- Editorial
- Congratulations Neil Pearce
- ERS-Copenhagen
  - Collaborators
  - Poster Presentation – P Ellwood
  - Poster Presentation – C Maritz
  - Poster Presentation – H Zar
  - PP Presentation – E Vlaski
- European Society of Dermatological Research Poster Presentation – H Williams
- Kyrgyzstan – P Ellwood
  - Photos from Bishkek and Jalalabat
- Publications
  - ISAAC Phase One Publications
  - ISAAC Phase Two Publications
  - ISAAC Phase Three Publications

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**NB:** The Phase Three B data and methodology checks are now finalised. If you have any outstanding correspondence with Philippa or Tadd from the IIDC please attend to this urgently.

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**Merry Christmas**
Our very own Professor Neil Pearce has been elected president of the International Epidemiology Association (IEA) at the recent World congress of Epidemiology in Bangkok.

Congratulations Neil
A well-deserved Honour

The association has just celebrated its 50th anniversary at the Bangkok meeting. Professor Pearce is the first president of the association from the Southern Hemisphere. He will be president – elect for three years, before assuming the presidency at the next World Congress of Epidemiology in Porto Alegre, Brazil in 2008

For more information go to:
European Respiratory Society Meeting
ERS

Tuesday September 20th 2005 was the occasion of the 2005 ERS/ISAAC collaborators social gathering in Copenhagen, Denmark, which was well attended and a lot of fun.

It was wonderful to meet again, ISAAC collaborators that I had met on previous ISAAC/ERS social evenings and to meet for the first time “new” collaborators. With over 17,000 people attending the ERS over the 5 day period, an ISAAC collaborators gathering is a great way to keep in touch. It is like meeting up with family members from around the world and we very much would like to continue this tradition. I hope you enjoy the collection of photographs.

Shortly after my return to New Zealand I learnt about the earthquake disaster in Pakistan. Our ISAAC collaborator from Karachi, Dr Naseer Mahmood who attended the ERS/ISAAC gathering travelled to the affected area to assist his people. It must have been heart wrenching to witness the devastation. Our hearts go out to the huge number of people who have been affected by this disaster and we hope each day gets a little easier.

The ERS meeting for 2006 will be held in Munich from September 2nd to the 6th and we are presently exploring the logistics for an ISAAC gathering. Further details will be included in a 2006 newsletter.

I would like to take this opportunity to thank all our ISAAC collaborators that I have had communication with over the past few years. Those I have met already and those I am still to meet. I hope one day it is possible to meet you all. I enjoy very much communicating with you. I would like to wish you and your families a happy Christmas, and a safe and productive 2006.

Kindest regards,

Philippa

Click here to see photos of the ISAAC Collaborators Function
ISAAC Social Gathering, Copenhagen, Denmark,

1. Renato Stein, Brazil
2. Heather Zar, South Africa
3. Gilberto Fischer, Brazil
4. Gary Wong, Hong Kong
5. Philippa Ellwood, New Zealand
6. Nadia Aït-Khaled, France
7. Colin Robertson, Australia
8. Lene Løchte, Denmark
9. Sandra Nora Gonzalez, Mexico
10. Manuel Soto Quiros, Costa Rica
11. Györgyi Zsigmond, Hungary
12. Zorica Zivkovic, Serbia & Montenegro
13. Leticia Merida, Mexico
14. Zoltán Novák, Hungary
15. Margarite Figuero, El Salvador
16. Osman Yusuf, Pakistan
17. Valente Merida, Mexico
18. Dante Hernández-Colín, Mexico
19. Kirthi Gunasekera, Sri Lanka

Absent for photograph:

Isabella Annesi-Maesano, France
Ahmed El Bousify, Libya
Luis Garcia-Marcos, Spain
Lelià Lo Rusp, Italy
Federica Miceto, Italy
Pedro Mondéjar, Spain
Céline Pénarol-Morano, France
Todor Popov, Bulgaria
Chantal Raherison, France
Malcolm Sears, Canada
Emilija Vlaski, Macedonia
Hartmut Vogt, Sweden
Philippa Ellwood’s presentation at the ERS “Replication of Sampling for Time Trends Analyses in an International Multi Centre Study - ISAAC
Challenges experienced in implementing the International Study on Asthma and Allergies in Childhood (ISAAC) protocol for establishing the prevalence of asthma, allergic rhinitis and eczema in children in a rural, resource-poor setting in South Africa.

Aim
- To describe the prevalence and severity of asthma, rhinitis and eczema in school-going children
- To obtain baseline measures for assessment of future trends in the prevalence and severity of these diseases
- To provide a framework for further longitudinal research into lifestyle, environmental, genetic and medical factors affecting these diseases

Study methods
A cross-sectional survey of children (8-10 years) aged 6-7 and 11-14 years by using the English ISAAC questionnaire was translated into Afrikaans and North Sotho.

Setting
119 randomly selected schools in a 50km radius from the centre of Polokwane, Limpopo Province, South Africa.

<table>
<thead>
<tr>
<th>Area</th>
<th>Month surveyed</th>
<th>Number of schools (participants)</th>
<th>Urban or rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balfour</td>
<td>Aug/Sept 2004</td>
<td>13</td>
<td>Rural</td>
</tr>
<tr>
<td>Mabopane</td>
<td>Feb 2005</td>
<td>10</td>
<td>Rural</td>
</tr>
<tr>
<td>Marapong</td>
<td>Aug/Sept 2004</td>
<td>18</td>
<td>Rural</td>
</tr>
<tr>
<td>Maunse</td>
<td>Aug/Sept 2004</td>
<td>13</td>
<td>Rural</td>
</tr>
<tr>
<td>Mopope primaries</td>
<td>Feb 2005</td>
<td>14</td>
<td>Rural</td>
</tr>
<tr>
<td>Polokwane</td>
<td>Aug/Sept 2004</td>
<td>24</td>
<td>Urban</td>
</tr>
<tr>
<td>Pongoro</td>
<td>Aug/Sept 2004</td>
<td>14</td>
<td>Semi-urban</td>
</tr>
</tbody>
</table>

Participants
Parents of children aged 6-7 years and children aged 11-14 years.
Completed questionnaires by language and age group.

<table>
<thead>
<tr>
<th>Language</th>
<th>6-7 year olds</th>
<th>11-14 year olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans</td>
<td>54.4%</td>
<td>9.8%</td>
</tr>
<tr>
<td>English</td>
<td>9.6%</td>
<td>20.6%</td>
</tr>
<tr>
<td>North Sotho</td>
<td>84.7%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Questionnaire completed by parent</td>
<td>10.7%</td>
<td></td>
</tr>
</tbody>
</table>

Challenges
The researchers experienced a number of challenges in the implementation of the standard ISAAC questionnaire namely:

1. Lack of basic equipment: A large number of schools did not own the required equipment to follow the ISAAC protocol. The ISAAC video and audio equipment could not be shown.

2. Names of areas differed in the official lists and in the vernacular.

3. Lack of official class lists in schools in rural areas.

4. Lack of clear understanding of the questionnaire by parents and children. A large number of questionnaires could not be included in the final analysis due to inconsistent answering of questions with regard to "Yes" patterns. In cases where a question was answered in the negative, the respondent incorrectly moved on to another question, but this was not the case in the Polokwane study, therefore data might have been compromised.

5. 80% of the questionnaires for the younger age group was completed by somebody other than a parent, e.g. guardian, sibling, grandmother who was not necessary in the position to report on past symptoms or diagnosis of conditions under investigation.

Conclusion
There is a clear need to develop materials and tools for the ISAAC study (or similar international studies) that would be useful in a resource poor setting which would enable studies of this kind to take place in developing countries and with participants whose literacy skills are poor.
Chantelle with supervisors

Chantelle with her two sets of twins aged 11 and 4 years
“incredible effort”
Health Zar presentation at the ERS

# The Rising Prevalence of Asthma, Allergic Rhinitis and Atopic Eczema in South African Children from 1995 to 2002

**HJ Zar, *RI Ehrlich, EG Weinberg**

School of Child and Adolescent Health, Red Cross Children’s Hospital and *School of Public Health, University of Cape Town, South Africa.

## Abstract

**Background:** The prevalence of asthma and allergic diseases in children has been increasing in developed countries, but there is limited information on these trends in Africa.

**Methods:** Comparison of cross-sectional data from two international studies of asthma and allergic disease in children (ISAAC 1995 and ISAAC 2002) conducted in South Africa and Europe, respectively. A comparison of data from two surveys conducted in South Africa in 1995 and 2002, using a standardized ISAAC written and video questionnaire.

**Results:** The prevalence of asthma, allergic rhinitis, and atopic eczema in South African children has increased significantly from 1995 to 2002. The prevalence of asthma in children aged 3-14 years in 1995 was 8.6%, and in 2002 it was 12.8%.

## INTRODUCTION

The prevalence of allergic disease has been increasing globally. In South Africa, the prevalence of allergic disease in different studies has been difficult to compare due to variability in populations studied, methodologies used, and definitions of allergic disease. Moreover, the burden of allergic disease is under-appreciated due to other pandemics such as HIV and respiratory infectious diseases.

## AIM

To investigate trends in the prevalence of asthma, allergic rhinitis and atopic eczema among South African adolescents.

## METHODS

- Standardized ISAAC written and video questionnaire.
- Random sample of schools in Cape Town Metropolitan area, same geographical area both surveys.

## RESULTS

The prevalence of asthma (Table 1 and 2), allergic rhinitis (Table 3) and atopic eczema (Table 4) increased.

### Table 1: 12 month prevalence of asthma symptoms – written questionnaire

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheeze</td>
<td>16%</td>
<td>12%</td>
</tr>
<tr>
<td>Exercise induced wheeze</td>
<td>21.5%</td>
<td>30%</td>
</tr>
<tr>
<td>Nasal symptoms</td>
<td>23.5%</td>
<td>34.5%</td>
</tr>
<tr>
<td>Sneezing wheeze</td>
<td>5.1%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Nasal obstruction</td>
<td>9.9%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Diagnosis asthma</td>
<td>1.1%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

### Table 2: 12 month prevalence of asthma symptoms – video questionnaire

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheeze</td>
<td>6.4%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Exercise induced wheeze</td>
<td>11.6%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Nasal symptoms</td>
<td>3.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Nondural cough</td>
<td>11.6%</td>
<td>17.3%</td>
</tr>
<tr>
<td>Sneezing wheeze</td>
<td>5.1%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

### Table 3: Allergic rhinitis 12 month prevalence

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasal symptoms</td>
<td>30.4%</td>
<td>34.4%</td>
</tr>
<tr>
<td>Impaired daily activity</td>
<td>22.3%</td>
<td>35.7%</td>
</tr>
<tr>
<td>Severe rhinorrhea</td>
<td>9.3%</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

### Table 4: Atopic eczema 12 month prevalence

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Itch</td>
<td>8.8%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Night waking due to itch</td>
<td>8.4%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Night waking &gt; 1 week</td>
<td>3.1%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

## ACKNOWLEDGMENTS

Researchers: E. Ngwadi, S. Abrahams, K. Fussens
Funding: PMG, South Africa, DA Thohle Society, AstraZeneca, Prophylaxis, Telkom SA, Stiefel
International ISAAC centre, New Zealand

Department of Education, Western Cape, school staff, participants.
A Power point presentation presented at the ERS by Dr Vlaski

**FAMILIAR SOCIO-ECONOMIC STATUS AND ASTHMA IN CHILDREN**

Vlaski E, Stavric K, Ilyanovski R, Sekova L, Kacarski D.
*University Children’s Hospital, Institute of epidemiology and biostatistics with medical informatics, PHO Zelenikarca, Skopje, PR Macedonia*

**AIMS**

As a positive association between socio-economic status and allergic diseases is suggested, the study was aimed:

- to explore the relationship between family size, mother’s educational level, tobacco smoke at home, wood/coal as heating at home and BMI, as factors related to familiar socio-economic status on asthma in schoolchildren.

**MATERIAL AND METHODS**

- Self-completed ISAAC phase 3 questionnaire on asthma and environmental questionnaire from 3028 children aged 13/14 yrs from 17 randomly selected schools in Skopje in 2001/2002
- Investigational parameters:
  - wheezing ever
  - wheeze in last 12 months
  - sleep-disturbing wheeze in last 12 months
  - speech-limited wheeze in last 12 months
  - exercise-induced wheeze in last 12 months
  - dry night cough in last 12 months

**RESULTS**

Prevalence of asthma symptoms

<table>
<thead>
<tr>
<th>Symptom</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheeze ever</td>
<td>556 (18.4)</td>
</tr>
<tr>
<td>Wheeze in last 12 months</td>
<td>286 (9.8)</td>
</tr>
<tr>
<td>Sleep-disturbing wheeze in last 12 months</td>
<td>87 (2.9)</td>
</tr>
<tr>
<td>Excessive smoking ever</td>
<td>36 (1.2)</td>
</tr>
<tr>
<td>Excessive smoking in last 12 months</td>
<td>431 (14.2)</td>
</tr>
<tr>
<td>Dry night cough in last 12 months</td>
<td>438 (15.5)</td>
</tr>
<tr>
<td>Asthma ever</td>
<td>52 (1.7)</td>
</tr>
</tbody>
</table>

Prevalence of socio-economic status parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>N=3,096</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living in own house</td>
<td>2059 (66.6)</td>
<td></td>
</tr>
<tr>
<td>Mother’s educational level</td>
<td>568 (18.1)</td>
<td></td>
</tr>
<tr>
<td>Income and primary</td>
<td>547 (17.8)</td>
<td></td>
</tr>
<tr>
<td>Passive smoking at home</td>
<td>2271 (73.7)</td>
<td></td>
</tr>
<tr>
<td>Wood/coal as heating at home</td>
<td>545 (17.9)</td>
<td></td>
</tr>
<tr>
<td>BMI normal</td>
<td>2376 (76.8)</td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>445 (14.6)</td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>132 (4.3)</td>
<td></td>
</tr>
</tbody>
</table>

Familiar socio-economic status and wheeze ever

Familiar socio-economic status and sleep-disturbing wheeze in last 12 months

Familiar socio-economic status and speech-limited wheeze in last 12 months

Familiar socio-economic status and exercise-induced wheeze in last 12 months

Familiar socio-economic status and asthma ever

**CONCLUSION**

- Our results support the familiar socio-economic status hypotheses in asthma.
- It was established that small family size and high BMI, as factors related to increased familiar socio-economic status, significantly increased the risk of self-reported asthma in schoolchildren.
- The negative association between mother’s educational level and night cough might be due to no specificity of this symptom for asthma in childhood.

Click to view this in Power Point Version
Is Eczema really on the increase worldwide?

Why did we do this study?
- We wanted to find out if eczema symptoms have increased worldwide over the last 5-7 years because:
  - Eczema occurs in children.
  - Eczema occurs in other countries in different age groups.
  - Many reports have shown that "long-term" disease such as eczema, asthma, and hay fever, have been on the increase over the last 30 to 40 years.
  - Bouts of eczema often occur in children.
  - Disease definitions for previous surveys in single countries have often varied between successive surveys.
  - Reporting by children and caregivers to the use of the term "eczema" vary widely, contributing to great variability.

What did we show?
The map below shows the change in prevalence of eczema symptoms between two successive ECRAD surveys 2-7 years apart for 299,828 children aged 0-5 years in 38 countries. The change in prevalence at each site between the two ECRAD surveys is shown in the following figure: the ratio of the mean, before, during, between the two ECRAD surveys, is 1.00 or 0.91 standard error or 0.85 standard error.

What does it all mean?
1. It is difficult to generalise from a single country's eczema symptoms across the whole world as different things appear to be happening in different places.
2. Although the ECRAD study has strengths in terms of comprehensive coverage, the use of identical standardized methods for repeat surveys, it is still possible that reported symptoms can be distorted by translation and cultural issues which could have changed over time.
3. The most important finding is that the epidemic of eczema seems to be continuing off or rising in some countries with previously high prevalence rates.
4. The picture elsewhere is different, with many formally low prevalence countries experiencing substantial increases in symptoms.
5. Collectively, these observations suggest that environmental factors are important for determining disease expression, and these thresholds affect the types of data that are taken to be meaningful. Eczema may be a disease that has increased in recent years.
I was extremely honoured to be invited recently to an international conference in Jalalabat, Kyrgyzstan to present on the ISAAC study. This conference was supported by the European Respiratory Society (ERS) and my travel was also sponsored by the ERS.

This was a tremendously exciting opportunity for me as I had never been to this part of the world before and I appreciated the opportunity to meet our ISAAC collaborators. However the logistics of travelling to Kyrgyzstan took a lot of planning and working out. I travelled for 35 hours, from New Zealand, (which included transits in Hong Kong, Delhi and Tashkent,) to Bishkek, the capital of Kyrgyzstan where I stayed for two nights before flying to Jalalabat.

My stay in Bishkek was made memorable by the kind invitation to stay with our Bishkek ISAAC Collaborator, Dr Cholpon Imanalieva and her lovely family. I visited the hospital where Cholpon and her colleagues worked and presented to her group after being given a wonderful lunch in their office. The following day I flew to Jalalabat in a very small plane, over the most magnificent mountain ranges, so close I felt that I could touch the tallest peaks. It was a beautiful day and the scenery was extraordinarily beautiful. I was collected from the airport by Nurlan, a local Dr and Higul, who was my interpreter for the occasion. My accommodation in Jalalabat was at Kutbolsun in the Health Resort area where the pure water is reported to be of the finest quality and consumed for its healing qualities by those who stay at the Health Resort. The view from my room was of those beautiful mountains that I had flown over. The 2 day international conference was organised by the ISAAC Jalalabat collaborator, Dr Shairbek Sulaimanov which was well attended and most successful. After the conference some of the delegates enjoyed a trip to the mountains where we visited a famous waterfall and afterwards were provided with a sumptuous meal before driving back to our accommodation.

My stay in Kyrgyzstan was enhanced by the kindness shown to me by everyone that I met. I enjoyed very much meeting new friends and I am indebted to the many that went out of their way to look after me in Bishkek and Jalalabat. Despite the language difficulties we were able to communicate and understand each other. The ISAAC collaboration and the ERS have provided me with an opportunity to appreciate a different environment and I am grateful. I have been humbled by my experience in Kyrgyzstan. I would have loved to include all my photos of this beautiful country.

To my friends in Kyrgyzstan: I feel truly privileged to have experienced your hospitality, your kindness, your generosity, your warmth and your sincerity. I loved my stay in Kyrgyzstan and hope in the years to come, that an opportunity to return is possible.

I will never forget you all.

Thank you.

Philippa Ellwood
Kyrgyzstan Photos

ISAAC Kyrgyzstan’s National Collaborator from Bishkek and Principal Investigator, Dr Cholpon Imanalieva and her wonderful ISAAC team

The International ERS Summer School Conference in Jalalabat, with the ISAAC Jalalabat Principal Investigator Dr Shairbek Sulaimanov.

Thank you to you all for your warmth and love, I will treasure memories for always.
ISAAC Phase One Worldwide Publications

Professor Neil Pearce
ISAAC Phase One Publications Coordinator
ISAAC Executive
E-mail: n.e.pearce@massey.ac.nz

1.0 Preliminary Papers


2.0 Main Findings


3.0 Other Overview Papers

**ISAAC Phase One Worldwide Publications - Continue**

### 4.0 Ecologic Analyses


4.3 Anderson HR and the ISAAC Phase I Study Group. Air pollution and asthma prevalence. In preparation.


### Other Papers


ISAAC Phase Two Publications

1.0 Preliminary Papers


ISAAC Phase Three Publications

1.0 Preliminary Papers


Professor Neil Pearce
ISAAC Publications Coordinator
ISAAC Executive
E-mail: n.e.pearce@massey.ac.nz
From all of us at the IIDC and on behalf of the Executive, we wish you all a happy and safe Christmas and happy new year.

May you have something to give

Something to share

And people to share it with

Anything given with the right intentions is a gift – even a hug (un abrazo)