ISAAC

INTERNATIONAL

STUDY OF

ASTHMA AND

ALLERGIES IN

CHILDHOOD

NEWSLETTER – APRIL 2002

This is an ISAAC year full of immense activity.

ISAAC Phase Two data collection has almost been completed, and analyses will begin. This is in the capable hands of Professor Stephan Weiland and his team at the University of Ulm who are coordinating the analyses (see page 4, ISAAC Phase Two).

ISAAC Phase Three is underway in at least 75 centres in 38 countries that took part in ISAAC Phase One (Phase 3A centres) and another 94 new centres in 40 countries (Phase 3B centres) a total of 169 centres from 65 countries that have registered with the ISAAC International Data Centre (IIDC). At the IIDC, in Auckland, we have received data from 9 of these centres. The deadline for Phase Three data to be at the IIDC is 30 November 2002 (see page 5, Phase Three Data Entry).

From the outset, the ISAAC Steering Committee has recognised the important contributions to ISAAC made by each collaborating centre. In the first worldwide publications principal investigators were listed at the end of the article, and this will be done for publications from ISAAC Phase Two and Phase Three. Authorship of articles is not straightforward with such a large collaborative study, and the ISAAC Steering Committee has put a high priority on trying to "get it right". We know that there are instances where the final authorship, which has appeared in the journal, has not pleased all participants in ISAAC.

Our current policy for publications of worldwide data is that:

i. The article will be authored by a named writing group and

either the ISAAC Phase One Study Group
or the ISAAC Phase Two Study Group
or the ISAAC Phase Three Study Group

depending on the Phase of the study.

The Study Group will include the Principal Investigators of collaborating centres, the ISAAC Steering Committee and senior staff at the IIDC.

ii. Papers will be circulated electronically to all Study Group members prior to submission for publication

I would welcome hearing from any of you about this current policy. We are very appreciative of your communications with us, and encourage contributions about your centre for the newsletter.

Innes Asher

On behalf of the ISAAC International Data Centre and Steering Committee

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ISAAC WEBSITE:
http://isaac.auckland.ac.nz

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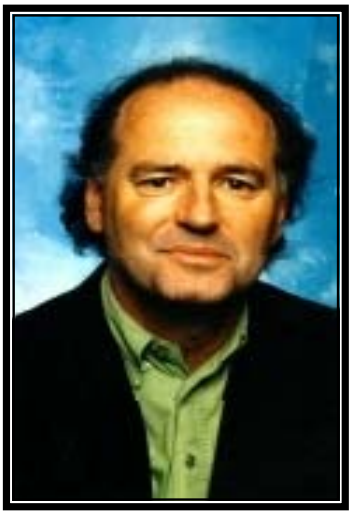
Stop Press: Phase Three Environmental Questionnaire Coding can be found on the ISAAC Website – visit the website Phase Three Menu or click the following link http://isaac.auckland.ac.nz/Phasethr/Phs3Frame.html

ISAAC PROFILE

Professor Neil Pearce, Executive Committee



Neil Pearce has recently established, and been appointed Director of the Centre for Public Health Research at the Massey University Wellington Campus (http://www.publichealth.ac.nz/).

Neil started doing epidemiology in 1979 when he attempted to get a job as an orderly (porter) at Wellington Hospital. No positions were available but he mentioned that he had a statistics degree and he found himself as a biostatistical consultant to the Wellington School of Medicine. He quickly found that it was more fun doing your own studies than analysing other people's, and moved over to a career in epidemiology. Since the completion of his PhD in epidemiology in 1985 he has been engaged in a wide range of public health research activities. During 1980-1988 his main research interest was in occupational epidemiology, and during this time he co-authored the leading textbook of occupational epidemiology, published by Oxford University Press in 1989.

In 1988 he co-founded the Wellington Asthma Research Group (WARG) at the Wellington School of Medicine. He conducted a wide range of research projects including the identification of the role of the asthma drug fenoterol in the New Zealand asthma mortality epidemic, studies of the management of asthma in the community, and more recently studies of the causes of the increases in asthma prevalence in New Zealand and worldwide. He has authored a textbook of asthma epidemiology, which was published by Oxford University Press in 1998. He has been involved in the ISAAC study from the beginning, and is currently a member of the ISAAC Executive.

His new Centre was established in 2000, and is conducting a wide range of public health research including respiratory disease, cancer, diabetes, Maori health, Pacific health and occupational and environmental health research.

Neil's interests include travelling; he has visited more than 70 countries in the course of teaching epidemiology and conducting epidemiologic studies, as well as taking a few detours along the way. His wife is New Zealand-born Chinese and they have travelled extensively in Asia with their two daughters (aged 10 and 17 years). This Christmas the family went to India for five weeks and Neil caught giardia, thus reducing his asthma risk considerably. He also has a strong interest in wine, food and culture, and his main ambition is to become Italian. He also enjoys listening to and playing music (he saw the Beatles play in Wellington in 1964 when he was ten years old). His attempts at sport have been unsuccessful to say the least. For example, he played football (soccer) throughout the 1980s, and averaged one goal per year while playing as a striker. One season he was injured and missed the second half of the season and was awarded the trophy for "most improved player". He was an enthusiastic surfer in the 1970s, and has recently taken up the sport again in an attempt to defy the laws of physics and biology.

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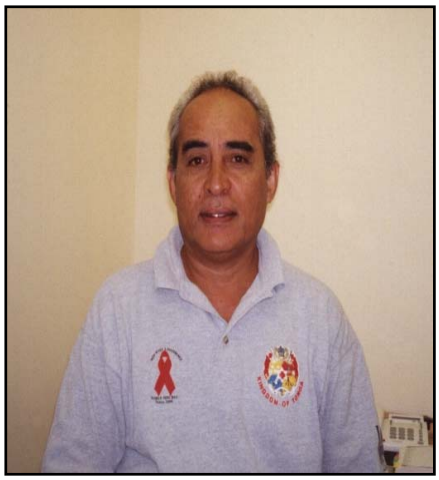
Checkoway H, Pearce NE, Crawford-Brown DJ. *Research methods in occupational epidemiology*. New York: Oxford University Press, 1989. [ISBN 0-19-505224-2].

Pearce N, Beasley R, Burgess C, Crane J. *Asthma epidemiology: principles and methods*. New York: Oxford University Press, 1998 [ISBN 0-19-508016-5].

ISAAC PROFILE

Dr Sunia Foliaki, Oceania Regional Coordinator



Dr Sunia Foliaki attended Tonga High School. From there he completed his medical education at the University of Papua New Guinea, before completing a Master of Public Health (MPH) degree at Tulane University School of Public Health & Tropical Medicine (USA) and a Master of Tropical Health (MTH) at the University of Queeensland (Aus.). He has received a World Health Organisation Fellowship as a Senior House Officer at Greenlane and Middlemore Hospital, a Hubert Humphrey Fellowship in the United States, an Australian Aid Fellowship and a UNFPA Fellowship.

He has had varied work experience within medicine as: Senior Medical Officer in Charge of Maternal Child Health & Family Health & Planning (MCH/FP) in Tonga; Project Director for the UNFPA funded National Reproductive Health Project for Tonga over the last 8 years. Over the same period, he has also been the Manager for Tonga's National Expanded Programme on Immunisation (EPI). His clinical experience in New Zealand include being a Senior House Officer at the A & E Department and Obstetric and Gynaecology Department at Middlemore, Royal North Shore and Greenlane Hospital; and Resident Medical Officer Port Moresby General Hospital and Angau Memorial Hospital - Papua New Guinea.

For the past eight years Sunia has been based at the Ministry of Health in his native home Nuku'alofa, Kingdom of Tonga. Dr. Sunia Foliaki is the Secretary and has been instrumental in establishing Tonga's National Health Ethics and Research Committee. He has now been awarded a two-year Wellcome Trust Fellowship and will be based with Neil Pearce at the Centre for Public Health Research at Massey University in Wellington, New Zealand.

His roles in ISAAC are:

- Regional Coordinator
- Steering Committee member

In 2001, Professor Neil Pearce recognised Dr Foliaki's efforts in recruiting Pacific countries for ISAAC Phase Three and recommended that Dr Foliaki replace him as the ISAAC Oceania Regional Coordinator and become a Steering Committee member. The Pacific is a fascinating part of the world with rapid economic and social change (i.e. westernisation) and large-scale immigration to countries (particularly in New Zealand) that are already taking part in ISAAC and can provide comparative data for Pacific people. There are plans to not only conduct ISAAC Phase Three in the Pacific but also produce publications comparing findings with those living in the Pacific - with those in Pacific people living in New Zealand, as well as with those in Maori (New Zealand) and Aborigines and Torres Strait Islanders (Australia).

For relaxation, Dr Foliaki enjoys tennis, fishing, reading on Astronomy, Egyptology and light Classical Music.

Dr Sunia Foliaki

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ISAAC PHASE TWO

ISAAC Phase Two is measuring features of asthma, allergic rhinoconjunctivitis and atopic eczema which were not measured in Phase One: skin examination, bronchial hyperresponsiveness, skin prick tests, serum IgE, and genetic studies. In addition there are questions on management and a "risk factor" questionnaire. Direct measurement of endotoxin and house dust mite antigen in the homes is being undertaken.

These measurements are more intensive than Phase One and require active child participation in the tests. Therefore, the study design is different from Phase One, with a sample size of 1,000 and the child contact modules usually being undertaken in a sub-sample of the children.

ISAAC Phase Two will enable the description of variation in disease prevalence beyond the level measured in Phase One by core questionnaires. Markers of disease will be related to individual exposure to environmental factors and genetic markers.

ISAAC Phase Two is being undertaken in 36 centres in 22 countries. The 25 centres from 15 countries from Europe are supported by a large grant from the European Union: Albania, Estonia, France (6 centres), Germany (2 centres), Greece (2 centres), Italy, Iceland, Netherlands, Norway, Portugal, Spain (4 centres), Sweden, Turkey and the United Kingdom. The 11 centres outside Europe are in 8 countries: Brazil, China (3 centres), Ecuador, Georgia, Ghana, India (2 centres), Oman and New Zealand.

ISAAC Phase Two fieldwork has now been completed in almost all centres.

The Coordinator for ISAAC Phase Two is Professor Stephan Weiland.

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He is ably assisted by Peter Rzehak, Phase Two Data Manager, Cathleen Borowski and Gudrun Weinmayr.

Serum IgE analyses will be undertaken by Professor Bengt Bjorksten (Karolinska Institute, Stockholm, Sweden). Genetic analyses will be performed by Professor William Cookson (Asthma Genetics Group, Wellcome Trust Centre for Human Genetics, Oxford, Uk). Allergen and endotoxin analyses in dust samples will be undertaken by Professor Bert Brunekreef (Environmental and occupational health group University of Utrecht, Netherlands) and house dust mite analyses by Associate Professor Julian Crane and Dr Robert Siebers (Wellington School of Medicine and Health Sciences, New Zealand).

Submitted by Associate Professor Innes Asher
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PHASE THREE DATA ENTRY

Many ISAAC Phase Three Principal Investigators are choosing to enter the data collected in their centre themselves using the Epi-Info data entry packages available on the ISAAC web site (http://isaac.auckland.ac.nz/Phasethr/Phs3Frame.html). The data entry packages do include instructions for use (see the 'readme.txt' file included in each package) but we thought it might be useful to offer a few extra suggestions.

To avoid loss of data (and wasted time) we suggest you save copies of the data file frequently during the data entry process. If your data file becomes damaged at any time in the future you should therefore have a recent backup copy to use as a replacement although you may have to re-enter some data. The data files do not occupy a large amount of disk space. You could modify the name of each copy to include a version number so that you know when they were saved (e.g. "I3FULL1.REC", "I3FULL2.REC", etc).

You should only view your data files in Epi-Info. Other programs such as Microsoft Word or Wordpad could cause damage that would make the data file difficult or impossible to read. You should also only view and edit the data using the 'ANALYSIS of data' option or the 'ENTER data' option of the 'PROGRAMS' menu in Epi-Info.

ISAAC strongly recommends that you use double entry of your data to minimise data entry errors (see section 6.1.3 of the ISAAC Phase Three Manual). You can carry out double entry of data in Epi-Info using the following steps:

Enter the data for all participants once. When entering the data the first time it is very important that you ensure that each participant has a unique SERIAL number (or a unique combination of the SCHOOL and SERIAL numbers) as this number or numbers will be used as a link when entering the data a second time.

Start the Epi-Info data entry program. You can do this by viewing the data entry directory in Windows Explorer and double-clicking on the file 'ENTER.EXE' or the file called 'ENTERX.EXE'. You can also start the data entry program by selecting 'ENTER data' from the 'PROGRAMS' menu in Epi-Info.

In the first field of the data entry program type the full name of your data file (e.g. "C:\isaac\dataentr\i3full1.rec").

In the second field of the data entry program type '4' to select the 'Re-enter and verify records in an existing data file' option.

When you proceed you will be asked to select a name or names of the identifying field(s). You should use SERIAL (or SCHOOL and SERIAL).

The data for each participant can then be re-entered. For best results the second entry should be carried out by a different person as it is very easy for one person to make the same error twice. In contrast, different data entry operators tend to make different errors and these will be identified by Epi-Info.

Whenever you enter a value that does not match the appropriate value from the first entry of the data you will be asked to choose which value is correct. You can make your selection based on the answers provided by the participant on the paper questionnaire.

Double entry of data will ensure that the data we analyze is as accurate as possible and you will gain greater benefit from your local analyses.

If you are having difficulty using Epi-Info 6 because of unfamiliarity with the English language, there are a large number of translated versions available from the Centers for Disease Control (CDC) web site (http://www.cdc.gov/epiinfo/EItrans.htm).

The final suggestion is to consider carefully whether it may be better to pay for a professional data entry service to carry out your data entry. Entering the data for approximately 3000 participants (approximately 6000 if you study both age groups) is a time consuming task, particularly with double entry. If you consider the salary costs for the time of yourself or the staff member(s) who is to carry out the task, as well as the value to you of the tasks that must be deferred while the data entry is completed, you may find that the costs for professional data entry are not too high. The quality of electronic data produced by a professional data entry service is also likely to be better than can be produced by people unfamiliar with data entry. Data entry services may use double entry as described above with specialised data entry software, or scanning technology. When implemented by experienced personnel, both of these methods will produce high quality data with few, if any, data entry errors.

We hope you find these suggestions helpful. Please contact Tadd Clayton (t.clayton@auckland.ac.nz) if you have any problems during data entry or with the Epi-Info data entry packages.

Mr Tadd Clayton
ISAAC Data Manager
t.clayton@auckland.ac.nz

ISAAC PHASE THREE REGISTRATION

Dear ISAAC Phase Three Collaborators

Greetings from the IIDC, Auckland, New Zealand.

Re: ISAAC Phase Three Centre Report.

As you are already aware, when your ISAAC Phase Three centre is registered (following approval from the appropriate Regional and National Coordinators) a Centre Report is generated by the ISAAC International Data Centre (IIDC). This Centre Report is either posted, or more recently, sent as a word document email attachment, to the nominated Principal Investigator/fieldworker, so that they can complete this as the study progresses in their centre.

Recently, the IIDC revised this Centre Report to make it even easier to understand and finalise, especially for those who undertook Phase One as well as Phase Three. In the next few months, I will be contacting any centre that has already been sent a Centre Report (those already registered) and will be asking them to replace the old Centre Report with the newer, revised version. Centres that have already submitted a completed Phase Three Centre Report to the IIDC (those that have finished data collection) will be contacted (by email) and asked to supply any additional information required. A revised, completed Centre Report will then be posted back to them for checking and to retain for their records. The final report is posted back to centres because the information is entered into an access database, which cannot be electronically transmitted. Please correspond with Philippa (p.ellwood@auckland.ac.nz) for any further information.

It is important to note that the Phase Three data checking process at the IIDC is not complete until the Centre Report has also been finalised. It would be appreciated if the Centre Report could be sent to the IIDC at the same time as the data is submitted.

You will find the updated Centre Report on the ISAAC Web Site (http://isaac.auckland.ac.nz) under Phase Three.

I look forward to the continuing correspondence throughout Phase Three, with you all. Please do not hesitate to contact me if there is anything else I can assist you with.

Warm regards

Philippa

ISAAC Research Manager
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PHASE THREE DATA DEADLINE

Submission Date: No later than 30 November 2002
Recipient Centre: ISAAC International Data Centre (IIDC)

Registered centres that wish to be included in ISAAC Phase Three worldwide publications must provide a complete data set and Centre Report to the IIDC by **30 November 2002**. The data and the Centre Report will then undergo a checking process by the IIDC in conjunction with each centre. A satisfactory data set is one which is prepared according to the Coding and Data Transfer Section of the Phase Three Manual and which has completed the data checking process above.

Reference: ISAAC Phase Three Manual; Page 24

YUGOSLAVIA REPORT

Yugoslavia has been approved as a new Phase Three ISAAC contributor after the embargo had been taken off, with the generous support of Professor Richard Beasley, Professor Bengt Björkstén, Associate Professor Innes Asher and Mrs Philippa Ellwood. This kind of study has been the very first and a unique epidemiological analysis on national base after ten years of isolation.

Dr Zivanovic and Dr Zivkovic

4 centres have been recruited and are registered with the ISAAC International Data Centre for the Phase Three Study in Yugoslavia:

Belgrade is the capital of Yugoslavia. The National Coordinator/Principal Investigator is Zorica Zivkovic and their institute is the Centre for Pediatric Pulmonology and Tuberculosis at the Medical Centre "Dra Dragisa Misovic".

Sombor is a northern city in Yugoslavia. The Principal Investigator is Eva Panic.

Nis is the second city in Yugoslavia and local Phase Three centre. The principal Investigator is Snezana Zivanovic.

Podgorica is the fourth centre in Yugoslavia to register for ISAAC Phase Three.

In the main cities remarkable numbers of collaborators have been included from the Center for Pediatric Pulmonology and TB, the Municipal Center for Tuberculosis, Primary Health Care Centers as well as primary schools and nurseries. Pediatricians, fellows-in-training, psychologists, nurses, teachers and other professional allies have done the fascinating job, entirely voluntarily. We have also had some support from the office of GlaxoSmithKline in Belgrade, to whom we owe their representative a great deal of gratitude for their generosity and cooperation.

In Belgrade we conducted this study in 40 schools and 5 nurseries, starting from February 2001. More than 3000 pupils (13/14 years of age) were invited to participate and almost 3000 children of the younger age group participated as well.

We held an initial meeting in Belgrade on 1st of February 2001 and started with data collection in schools covering down town Belgrade and suburbs with a more rural style. It will be important to compare these areas which present various social and economic levels in the same geographic zone. The second impressive issue would be demographic changes that we experienced during the troublesome years when thousands of immigrants from the former Yugoslav Republics settled mainly in Belgrade. Furthermore, the other local centers where we conducted the study will present totally different sides of our country from geographical point of view. One city has been a famous industrial center while another has been an agricultural centre. Therefore we believe that the results would be interesting for comparison.

The second regional meeting of all researchers was held in May 2001 with a preliminary cut off report of the results. We suspect that the prevalence rate of asthma symptoms, rhinitis and eczema are very similar to the findings in western style life countries in relation to countries in Eastern Europe. We may find explanations after exploring the environmental conditions from the environmental questionnaires. It seems rather strange: Yugoslavia has been isolated for 10 years, has experienced enormous deterioration of living conditions, undetectable air pollution, large-scale migrations of the refugees, but obviously allergy has been increasing. The estimation of prevalence rates in Yugoslavia should be of special interest for all our further studies (epidemiological and clinical as well) and enable us to identify the risk factors in our region. Exclusive education and management programs should enable better quality of life of our children and their families.

Best wishes

Zorica Zivkovic, MD, PhD
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Federal Expert for Pediatric Pulmonology
National Coordinator for ISAAC Yugoslavia
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ANALYSIS OF ISAAC PHASE THREE STUDY SURVEY DATA FROM ONE CENTRE (Part 2)

Association between Prevalence and Environmental Questions

New to ISAAC Phase Three is the option of asking the "Environmental Questions". This adds a new dimension of interest over the information collected in ISAAC Phase One. The first question that will be asked of the environmental questions is about the prevalence of these factors in the population. The techniques mentioned in the first article can be used on these questions too. The next question will be on how exposure to a particular environmental characteristic is associated with the occurrence of one of the asthma or other allergic symptom questions. This article addresses this problem.

The simplest form of displaying the association between symptom prevalence and the environmental questions is by use of a 2x2 table. Prevalence is a simple binary (yes/no) measure and so are most of the environmental questions and so can be simply displayed.

		Prevalence	
		Yes	No
Environmental	Yes	19	73
Question	No	51	250

This table, however, gives no information on which school each child attended and there might be a relationship between the school, prevalence and the environmental question.

School can be incorporated by having a table like the above for each school but this would be too unwieldy for publication. However, these numerous tables can be analysed using the Mantel-Haenszel statistic. This is a stratified analysis. An example is shown below. Note that the result of the analysis of the simple 2x2 table can be quite misleading, in this example the estimate is in the opposite direction. Also given is the method for calculating the confidence interval of the estimate. This is a necessary statistic for assessing the worth of the estimate. An estimate with a very wide confidence interval is, usually, not of great worth regardless of its magnitude.

Mantel-Haenszel relative risk is calculated using the numbers in each of the schools using

School j

	Prev=yes		Total
Exposed	d_{j1}	.	n_{j1}
Not exposed	d_{j2}	.	n_{j2}
	D_j	.	N_j

$$RR_{MH} = \frac{\sum_{j=1}^{J} d_{j2} n_{j1} / N_j}{\sum_{j=1}^{J} d_{j1} n_{j2} / N_j}$$ where there are J schools.

ANALYSIS OF ISAAC PHASE THREE STUDY SURVEY DATA FROM ONE CENTRE (Part 2)

Association between Prevalence and Environmental Questions continued

Because of the skewness of the distribution the variance is calculated on the log scale.

$$\text{var}\left[\ln(RR_{MH})\right] = \frac{\sum_j \left(n_{j1}n_{j2}D_j - d_{j1}d_{j2}N_j\right)/N_j^2}{\left(\sum_j d_{j1}n_{j2}/N_j\right)\left(\sum_j d_{j2}n_{j1}/N_j\right)}$$

(The variance formula is that of Greenland, S. and Robins, J.M. (1985), "Estimators of the Mantel-Haenszel Variance Consistent in Both Sparse Data and Large-Strata Limiting Models," Biometrics, 42, 311 -323.)

An example of the use of these formulae with a small set of hypothetical data is shown below.

School=1

EQ Prevalence

Frequency	Yes	No	Total
Yes	0	12	12
No	16	126	142
Total	16	138	154

Value1 = 0*142/154 = 0
Value2 = 16*12/154 = 1.247
Value3 = (12*142*16-0*16*154) /(154*154)

RR = Value1/Value2 = 0

School=2

EQ Prevalence

Frequency	Yes	No	Total
Yes	7	14	21
No	18	85	103
Total	25	99	124

Value1 = 7*103/124 = 5.815
Value2 = 18*21/124 = 3.048
Value3 = (21*103*25-7*18*124) /(124*124)

RR = 1.91

School=3

EQ Prevalence

Frequency	Yes	No	Total
Yes	12	47	59
No	17	39	56
Total	29	86	115

Value1 = 12*56/115 = 5.843
Value2 = 17*59/115 = 8.722
Value3 = (59*56*29-12*17*115) /(115*115)

RR = 0.67

Add all the Value1's together 0 + 5.815 + 5.843 = 11.658
Add all the Value2's together 1.247 + 3.048 + 8.722=13.017
And take the ratio 11.658 / 13.017 = 0.896

The Mantel-Haenszel relative risk is 0.896.

Association between Prevalence and Environmental Questions continued

The variance of the log of this estimate is calculated by adding the Value3's together to get 9.121 and then combining with the sums of Value1 and Value2.

Variance of log(Mantel-Haenszel estimate) = 9.121 / (11.658 * 13.017)
= 0.060

This can be used to calculate the lower and upper confidence interval of the Mantel-Haenszel estimator. The 95% confidence interval is

lower limit = 0.896 * exp(-1.96 * sqrt(0.060)) = 0.554 and
upper limit = 0.896 * exp(+1.96 * sqrt(0.060)) = 1.448 where

exp means exponentiation and sqrt mean square root.

The stratified relative risk (with 95%CI) is 0.90 (0.55, 1.45)

All schools combined

EQ	Prevalence		
Frequency	Yes	No	Total
Yes	19	73	92
No	51	250	301
Total	70	323	393

Value1 = 19*301/393 = 14.552
Value2 = 51*92/393 = 11.939
Value3 =(92*301*70-19*51*393)
/(393*393)

Ratio = 14.552/11.939 = 1.219

Unstratified relative risk (95%CI)

1.22 (0.76,1.95)

Notice that although the same conclusion in each analysis is reached, the unstratified relative risk is quite different from the stratified RR. This is because quite different weighting is given to the schools in each of the calculations.

Another method of analysis of data of this type is through the use of logistic regression. These two methods, Mantel-Haenszel and logistic regression often produce very similar estimates but the logistic regression is to be preferred if both are available as it is more accurate. Logistic regression also allows other variables to be included in the model. For example, it may be thought necessary to adjust for the child's gender or ethnicity or possibly for the geographical area in which the school is found. The preferred analysis would allow the school to be treated as a random effect. This is a sophisticated method of analysis and can be done with the statistical computer package SAS procedure *PROC NLMIXED* (there is other software that can do this analysis too). If this software is not available then using a logistic regression and including the schools as a series of binary variables is another option and many statistical software packages have the ability to do a logistic regression.

Mr Alistair Stewart

Biostatistical Consultant
ISAAC Steering Committee Member

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ISAAC PUBLICATIONS

There have been a number of suggestions about including the ISAAC Phase One Study Group more closely in publications from Phase One. The ISAAC Executive and Steering Committee have therefore decided that henceforth all global Phase One papers will be authored by specified authors "and the ISAAC Phase One Study Group. Therefore, in future I will send all members of the ISAAC Phase OneStudy Group a copy of draft papers for comment. I should stress that with such a large number of people involved, we cannot accommodate everyone's comments and suggestions, but I will do my best.

Of course there are only a few papers left to be published from Phase One (we are concerned with global ISAAC papers, not papers that may be written and published regionally or locally), but we are piloting this approach with the intention of adopting it for all global ISAAC Phase III publications.

The following Phase One ecologic publications have been published, are in press, or are in preparation:

Anderson R, Beasley R, David Strachan, Colin Robertson C, and the ISAAC Phase One Study Group. Mortality and hospitalisation rates. In preparation.

Anderson HR, Poloniecki JD, Strachan DP, Beasley R, Björkstén B, Asher MI for the ISAAC Phase One Study Group Immunization and symptoms of atopic disease in children: results from the International Study of Asthma and Allergies in Childhood. *Am J Public Health 2001; 91(7): 1126-1129*

Bjorkstën B, Kildegaard-Nielsen S, von Mutius E, Cheng S, Pearce N. Antibiotic sales and the prevalence of symptoms of asthma, rhinitis and eczema in 13-14 year old children: The International Study of Asthma and Allergies in Childhood (ISAAC). In preparation.

Burr ML, Emberlin JC, Treu R, Cheng S, Pearce N, and the ISAAC Phase One Study Group. Pollen counts in relation to the prevalence of rhinitis and asthma in the International Study of Asthma and Allergies in Childhood (ISAAC). In preparation.

Ellwood P, Asher MI, Björkstén B, Burr M, Pearce N, Robertson CF and the ISAAC Phase One Study Group. Diet and asthma, allergic rhinoconjunctivitis and atopic eczema symptom prevalence: an ecological analysis of the International Study of Asthma and Allergies in Childhood (ISAAC) data. Eur Respir J 2001; 17: 436-43.

Stewart AW, Mitchell EA, Pearce N, Strachan DP, Weiland SK, on behalf of the ISAAC Steering Committee. The relationship of per capita gross national product to the prevalence of symptoms of asthma and other atopic diseases in children (ISAAC). Int J Epidemiol 2001; 30: 173-9.

Von Mutius E, Pearce N, Beasley R, Cheng S, Von Ehrenstein O, Björkstén B, Weiland S, on behalf of the ISAAC Steering Committee. International patterns of tuberculosis and the prevalence of symptoms of asthma, rhinitis and eczema. Thorax 2000; 55: 449-53.

Weiland SK, von Mutius E, Hüsing A, Asher MI on behalf of the ISAAC Steering Committee. Intake of trans fatty acids and prevalence of childhood asthma and allergies in Europe. Lancet 1999; 353: 2040-41.

Weiland S, Hüsing A, Strachan DP, Pearce N, on behalf of the ISAAC Study Group and ISAAC Europe. Climate and the prevalence of symptoms of asthma, allergic rhinoconjunctivitis and atopic eczema in children. Submitted for publication.

ISAAC PUBLICATIONS CONTINUED

There are also the following papers (other than ecologic analyses) using Phase One data:

Anderson R, et al. Synthesis/overview of Phase One data. In preparation.

Crane J, Beasley R, Mallol J, on behalf of the ISAAC Study Group. Agreement between written and video questions for comparing asthma symptoms in ISAAC (the International Study of Asthma and Allergies in Childhood). In preparation.

Pearce N, Sunyer J, Cheng S, Chinn S, Bjorksten B, Burr M, Keil U, Anderson HR, Burney P, on behalf of the ISAAC Steering Committee and the European Community Respiratory Health Survey. Comparison on asthma prevalence in the ISAAC and the ECRHS. Eur Resp J 2000; 16: 420-6.

Stewart AW, Mitchell EA. Month of birth and childhood atopic diseases: the International Study of Asthma and Allergies in Childhood (ISAAC). In preparation.

However, if you have further ideas for Phase One ecologic analyses, I would be pleased if you could contact me with a proposal, which can be placed before the ISAAC Executive.

Professor Neil Pearce
Chair, ISAAC Publications Committee
ISAAC Executive.

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ISAAC Phase One Data on the ISAAC Web Site

The ISAAC Steering Committee would like to make the full results of ISAAC Phase One in frequency form available to all researchers in order to promote research. Initially it was planned to prepare a publication but the recent growth in the widespread use of the World Wide Web has led the Steering Committee to make the data available on the ISAAC web site. The data can now be viewed at:

http://isaac.auckland.ac.nz/PhaseOne/Data/DataFrame.php

A link is also available from the Phase One section of the ISAAC web site. Please report any problems to Tadd Clayton (t.clayton@auckland.ac.nz). We hope that you find this presentation of the ISAAC Phase One data informative and useful.

Mr Tadd Clayton

t.clayton@auckland.ac.nz

[3022] Individual allergens as risk factors for asthma and bronchial hyperresponsiveness in Chinese children.

G.W.K. Wong, D.S.C. Hui, T.F. Leung, T.F. Fok, N.S. Zhong, Y.C. Chen, C.K.W. Lai. Departments of Paediatrics and Medicine, Chinese University of Hong Kong, Hong Kong, China; Guangzhou Institute of Respiratory Disease, Guangzhou, China; Capital Institute of Pediatrics, Beijing, China.

The prevalence of asthma is relatively lower in the Asian population when compared with the West. Within the Chinese population, schoolchildren from Hong Kong were found to have the highest rate of asthma. The role of atopy in the manifestation of asthma in Chinese children is not well defined. This study aims to determine the relationship of sensitization to individual allergens and the development of asthma and BHR in schoolchildren from three Chinese cities: Hong Kong, Beijing and Guangzhou. Community-based random samples of schoolchildren aged 9-11 year old from 3 Chinese cities were recruited for study using the International Study of Asthma and Allergies in Childhood (ISAAC) Phase II protocol. Subjects were studied by parental questionnaires (n=10902), skin-prick tests (n=3479), and methocholine challenge test (n=608). The prevalence rates of asthmatic symptoms and atopic sensitization were highest in Hong Kong schoolchildren (Atopy rate: Hong Kong, 41.2%; Beijing, 21.9%, Guangzhou, 30.8%). Multi-variate logistic regression analyses revealed that sensitization to D. pteronyssinus (OR 4.48; 95%CI: 3.02-6.66), Cat (2.59; 1.67-4.03), D. farinae (2.41; 1.65-3.51) and mixed grass pollen(2.85; 1.24-6.50) were significantly and independently associated with current wheeze. Furthermore, sensitization to Cat (3.01;1.39-6.52) and D. farinae (3.67;1.93-6.97) were also significantly associated with BHR. The high prevalence rate of allergen sensitization in Hong Kong schoolchildren probably contributes to the higher prevalence of childhood asthma in Hong Kong schoolchildren when compared with those children from Mainland China.

Supported by HK RGC Grant CUHK232/96M.

Thematic Poster Session: Assessment of risk factors for severe childhood asthma (1:30 PM-3:30 PM)

ISAAC NOTICES

PHASE THREE DATA DEADLINE

Submission Date: No later than 30 November 2002
Recipient Centre: ISAAC International Data Centre (IIDC)

Registered centres that wish to be included in ISAAC Phase Three worldwide publications must provide a complete data set and Centre Report to the IIDC by **30 November 2002**. The data and the Centre Report will then undergo a checking process by the IIDC in conjunction with each centre. A satisfactory data set is one which is prepared according to the Coding and Data Transfer Section of the Phase Three Manual and which has completed the data checking process above.

Reference: ISAAC Phase Three Manual; Section 6.14: Page 24

ISAAC PHASE THREE

Data handling and analysis

Each centre is responsible for coding its own data and data entry, although in some regions/countries, one centre may take responsibility for this. Data should be double entered. Double entry is a common method of data entry that minimises data entry errors and is the expected method of data entry for ISAAC. The data is entered two times, preferably by two different people. The two versions of the data set are compared and any differences checked against the original questionnaire. Dedicated data entry software (EpiInfo) will allow the comparison between the first and second entry to occur as the second entry to occur as the second entry is made. Any inconsistencies can be resolved at that time based on the original questionnaire. If alternative methods are planned, these should be discussed in advance with the IIDC.

If centres wish to use an EpiInfo data entry package, the ISAAC EpiIfo it can be obtained from Tadd Clayton (t.clayton@auckland.ac.nz) or the ISAAC website: http://isaac.auckland.ac.nz/

The questionnaires must be kept for a minimum of 3 years (or according to local rules) to allow checking against the computer record, if this should be necessary.

Data will be sent to the IIDC as detailed in the Phase Three manual data and coding transfer section pages 45-58. Collaborators should expect an acknowledgement of receipt of data on its arrival at the IIDC. Please check this occurs, because mail can occasionally go astray. After acknowledgement of receipt of data, the data will undergo a number of checks at the IIDC and a report on the data will be issued to the Centre within 2 months. This report will provide a summary of the data checks made by the IIDC and will identify areas where a response is requested from the collaborating centre. This data checking process must be completed before centre data will be analysed in publications of worldwide Phase Three data. At the IIDC, centre data will be entered onto a PC with the necessary statistical analysis capabilities and a copy of the data will be kept off site in a protected environment. Collaborators are encouraged to visit the IIDC.

Reference: ISAAC Phase Three Manual; Section 6.1.3: Page 24

First Announcement

13.TH INTERNATIONAL EPIDEMIOLOGY SUMMER SCHOOL IN ULM
UNIVERSITY OF ULM, GERMANY

Course Outline:

Introductory Methods in Epidemiology
Wayne D. Rosamond
University of North Carolina at Chapel Hill, USA

Analytic Methods in Epidemiology
Jay Kaufman
University of North Carolina at Chapel Hill, USA

Infectious Disease Epidemiology
David Weber
University of North Carolina at Chapel Hill, USA

Clinical Epidemiology
William Miller
University of North Carolina at Chapel Hill, USA

Date: July 1 – 5, 2002

Location: University of Ulm / Germany

Language: English

Fee: € 200,- per course participation fee (€ 150,- for members of the German Epidemiological Association DAE; € 75,- for students)

Program Director: Prof. Dr. med. Stephan Weiland

For further information please contact:

Daniela Oesterle/Hilde Böller
Dept. of Epidemiologie / University of Ulm
Helmholtzstr.22
D-89081 Ulm
Phone.: ++49 731 50 31064 or 50 31098 (9.00 – 12.00 am)
Fax: ++49 731 50 31069
E-mail: daniela.oesterle@medizin.uni-ulm.de

Deadline for application: May 31, 2002