ISAAC

INTERNATIONAL STUDY OF ASTHMA AND ALLERGIES IN CHILDHOOD

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NEWSLETTER CONTENTS

NEWSLETTER – MAY 2001

Dear Colleague

We welcome your involvement in and support of the ISAAC programme.

The ISAAC programme has the following components: ISAAC Phase One, Ecological Analyses of Phase One, ISAAC Phase Two, and ISAAC Phase Three

PHASE ONE

ISAAC Phase One was completed in 1996 and in 1997-1999 four papers were published (see citations page 4). Research papers prepared for publication in journals are by necessity limited in length therefore only a limited subset of Phase one data could be presented. The Steering Committee has been exploring additional means by which the ISAAC Phase One data could be presented in full. We have decided to present the Phase One data on the ISAAC website (http://isaac.auckland.ac.nz) to make the data available to a wider audience, and allow full publication of the data. We seek permission of the Principal Investigators of each ISAAC Phase One centre before placing this data on the website. You will each be receiving a letter from me about this.

ECOLOGICAL ANALYSES

Several ecological analyses of Phase One data have been published, and others are submitted or in preparation (see pages 4 and 5). There remain some other interesting ecological analyses that can be done using the entire international Phase One data set. We are keen for ISAAC investigators to make proposals for further analyses that they wish to undertake. If you are interested, please contact Professor Neil Pearce (n.e.pearce@massey.ac.nz)

PHASE TWO

ISAAC Phase Two is being completed under the very able coordination of Dr med Stephan Weiland (see page 6). The commitment of centres to this intensive Phase has been fantastic. A large grant from the European Union has enabled data flow and analysis to progress well in Europe. There are several centres outside Europe, which will enable very interesting comparisons.

PHASE THREE

Phase Three is beginning for many centres (see page 9). The response from centres has been really encouraging, and communication is flowing well. We look forward to receiving all registration documents before long.

GLAXOSMITHKLINE GRANTS

We are very appreciative of the large funding support received from GlaxoSmithKline International (formerly GlaxoWellcome). Without this support ISAAC Phase One would not have been completed and ISAAC Phase Three would not be starting. The grants from GlaxoWellcome have supported many activities of the ISAAC International Data Centre in Auckland, and regional coordination of Phases One and Three. This support has been essential to the ISAAC Programme.

We look forward continuing our communication with you.

Best wishes

Innes Asher

On behalf of the ISAAC International Data Centre and Steering Committee
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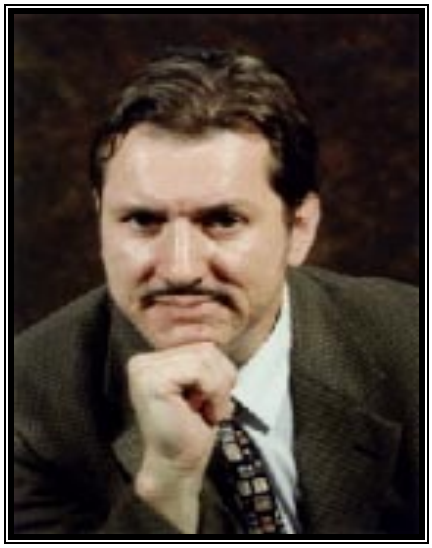
ISAAC Profile: Professor Hywel Williams, ISAAC Steering Committee



Early origins

I was born in a mining village in South Wales where unemployment is high and sheep now outnumber people. But the people were warm and they called a spade a spade. I was educated in the local comprehensive schools. This taught me a lot about life and to judge people by who they are rather than which school they went to.

Early training

I trained in medicine at Charing Cross Hospital, Fulham, London. Here I had an absolute wheeze of a time (not in the asthmatic sense, although I do suffer from asthma, hay fever and eczema). Although I became a bit of an "academic" after doing an intercalated BSc in Anatomy (even then I was obsessed by dermatology), I also ensured that I lived college life to the full. My zenith was running a 10 piece jazz-funk group called "Discharge". Enough said. Let's move on.....

Later training

I then did my rounds in the London hospital circuit doing the medical membership exam whilst "itching" to get into specialist dermatology training. This I did at King's College Hospital where I became interested in skin diseases affecting the black population. I was disillusioned by cytokine reductionist biology at the time, and I jumped at the opportunity of pursuing epidemiological research through a Wellcome Trust Fellowship. I studied with the late Professor Geoffrey Rose in his last year (1990) at the London School of Hygiene and Tropical Medicine. It was there that I met David Strachan (a la ISAAC) and struck up a friendship and collaboration that is alive to this day.

My trip to Jamaica

My fellowship project was supposed to be all about comparing the prevalence of atopic eczema in Black Caribbean children in London with similar children in Jamaica. Unfortunately, I found that the diagnostic criteria for atopic eczema were just unusable for epidemiological studies. I then spent the next 5 years developing these - hence my role in ISAAC. So I never made it to Jamaica that time, but you will be pleased to know that I employed a Jamaican dermatologist to continue the study and I finally made it to Jamaica 2 years ago. Ya Mon, no problem.

And the rest.....

Is a bit boring for you, I expect. I was appointed Foundation Professor of Dermato-Epidemiology (that means we made up the title to sound impressive) here in sunny Nottingham in 1998. My main disease interest is still childhood eczema, although I am also co-ordinating editor of the Cochrane Skin Group - an International Group dedicated to summarising evidence about interventions for skin diseases. We also conduct independent randomised controlled trials on treatments for skin diseases as well as continuing epidemiological and methodological work relevant to atopic eczema. I look after 7 research staff, and for my sins, I am also Director of Research and Development for the hospital. I have published over 150 peer-reviewed papers and co-edited the first textbook of dermato-epidemiology with David Strachan. More recently I have published the first textbook on the Epidemiology of atopic eczema and I am now working on a textbook of Evidence-Based Dermatology with the British Medical Journal.

My role in ISAAC

...is simple. I am there to define the phenotype and defend the importance of atopic eczema when trying to understand the totality of atopic disease. Most atopic disease surveys are understandably dominated by asthma. Yet atopic eczema is just as common and miserable at times, and it is visible, making it easy to measure using our photographic protocol.

Work aside

I suppose I'm a bit mad really. I enjoy wine, laughter, cooking and unpretentious people. I play jazz trombone, collect cacti, keep classic cars and enjoy restoring our old house. I've become a bit fat and unfit since becoming a professor, but I'm fighting back with a newly bought childish mountain bike with front and rear suspension. My wife, Molly, is Chinese Malaysian (yes, that's right - this means a trip to Malaysia every other year, and yes, she is a fantastic cook). We have one daughter Siân aged 12 who is the light of our lives.

More information

Visit some of the websites that our Group run:

1. Department site: www.nottingham.ac.uk/therapeutics/Dermatology/
2. Cochrane skin group: www.nottingham.ac.uk/~muzd
3. The NHS HTA systematic review on atopic eczema: www.ncchta.org
4. The NHS acne study: www.nottingham.ac.uk/~muzacn
5. The International Dermato-Epidemiology Association (IDEA): www.nottingham.ac.uk/~muzidea
6. The British Epidermo-Epidemiology Society (BEES): www.bad.org.uk

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ISAAC Profile: Professor Bengt Björkstén, ISAAC Regional Coordinator

Looking back at my curriculum vitae, I realise that I have moved around a bit over the years Actually I have worked in all but one of the Swedish medical schools, and in universities in USA, Australia and Israel on post doc's and sabbaticals. In 2000, I took up a position as Executive Director of a newly created interdisciplinary Centre for Allergy Research at the Karolinska Institute in Stockholm, Sweden.

My early years were spent in Helsinki, Finland and in 1948 my family and I moved to Sweden. In 1967 I received my degree in Medicine from Lund University. It was difficult, however, to decide which speciality to end up in. Therefore, the following years was spent exploring 11 different clinical specialities, until I eventually decided that paediatrics was the most fun, besides family medicine. More or less by chance I became interested in research and temporarily left clinical paediatrics to complete a thesis at Umeå University. In 1975-1976, all the family spent an exciting year in Minneapolis. In 1979 I joined Pharmacia Inc. as the Director of Biomedical Research and adjunct professor of Paediatric Immunology at Uppsala University. Five years later I left the industry to become professor of Paediatrics at Linköping University and Chief-of-Staff. After the collapse of the Soviet Union, much time was spent in several Eastern Europe cities, particularly in Tartu University Estonia, establishing research, teaching and child health. The work was acknowledged by a Honorary Doctorate and a position as Adjunct Professor in Estonia.

Starting as an activist already in secondary school. I have devoted considerable time in various organisations over the past year, e.g. as chairman, secretary or board member of numerous student organisations (very far from research!) and later as the chairman of regional chapters of the Young Doctors Organisation, the Swedish Paediatric Association and lately, as the President of the Scandinavian Paediatric Federation.

My roles in ISAAC are:

- Steering Committee Member
- Executive Committee Member
- Regional Co-ordinator of Northern and Eastern Europe

Much of my spare time is devoted to various activities for example:

- Member of the Executive of the Baltic Jewish Forum
- Devoted to humanitarian and cultural support in Estonia, Lativa, Lithuania and Kaliningrad.

I am a keen fan of opera and theatre and try to read history whenever there is time.

Being a Finn, I had sauna built in an apartment in Central Stockholm when we moved here a few years ago and also built a sauna at our summer cabin, which is by the shore of an isolated lake. The summer cabin is the centre for wide excursions into the woods picking mushrooms of many different kinds, which so far are non-poisonous, and also kayaking. My 4 adult children have been dispersed over the world, but currently only my eldest son is building his future in China, while the three younger children have returned to Sweden, at least temporarily.

Professor Bengt Björkstén

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ISAAC PHASE ONE PUBLICATIONS

1997 – 1999 Phase One Data publications:

The International Study of Asthma and Allergies in Childhood (ISAAC) Steering Committee. Worldwide variation in the prevalence of symptoms of asthma, allergic rhinoconjunctivitis, and atopic eczema: ISAAC. Lancet 1998; 351: 1225-32.

Strachan DP, Sibbald B, Weiland SK, *et al.* Worldwide variations in prevalence of symptoms of allergic rhinoconjunctivitis in children: the International Study of Asthma and Allergies in Childhood (ISAAC). *Pediatir Allergy Immunology* 1997: 8: 161-176

Williams H, Robertson C, Stewart A, Aït-Khaled N, Anabwani G, Anderson HR, Asher MI, Beasley R, Björkstén B, Burr M, Clayton T, Crane J, Ellwood P, Keil U, Lai C, Mallol J, Martinez F, Mitchell E, Montefort S, Pearce N, Shah J, Sibbald B, Strachan D, von Mutius E and Weiland S. Worldwide variations in the prevalence of symptoms of atopic eczema in the international study of asthma and allergies in childhood. J Allergy Clin Immunol 1999; 103: 125-38.

The International Study of Asthma and Allergies in Childhood (ISAAC) Steering Committee. Worldwide variations in the prevalence of asthma symptoms: the International Study of Asthma and Allergies in Childhood (ISAAC). *Eur Respir J* 1998 12, 315-335

Update of Phase One ecologic publications have been published, are in press, or are in preparation:

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.

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.

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.

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 (3): 436-443

Anderson HR, *et al.* Immunisation and Childhood. Am J Publ Health, in press.

Mitchell EA, Stewart AW. The relationship of tobacco smoking to the prevalence of symptoms of asthma and other atopic diseases in children: the International Study of Asthma and Allergies in Childhood (ISAAC). Submitted.

Anderson R, et al. Air pollution. In preparation.

Bjorkstén B, Kildegaard Nielsens, *et al.* Antibiotics. In preparation.

Crane J, *et al.* Detergents. In preparation.

Burr M, Treu R, Emberlin JC, Pearce N, on behalf of the ISAAC Study Group. Pollens. In preparation.

Shirtcliffe P, Beasley R, on behalf of the ISAAC Study Group. Other infections. In preparation.

Anderson HR, Beasley R, Strachan DP, Robertson C, Mortality and hospitalisation rates. In preparation.

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. In preparation.

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

Mallol J, Asher MI, Williams H, Clayton T, Beasley R. ISAAC Findings in children aged 14 years: an overview. *Allergy Clin Immunol Int* 1999; 11: 176-182.

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

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.

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

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

Neil Pearce
Chair
ISAAC Publications Committee
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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

Ellwood P, Asher MI, Björkstén B, Burr M , Pearce, 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. Ellwood P, Asher MI, Björkstén B, Burr M , Pearce, Robertson CF, and the ISAAC Phase One Study Group. © ERS Journals Ltd 2001.

ABSTRACT

Several studies have suggested that the increasing prevalence of symptoms of asthma, rhinitis and eczema, could be associated with dietary factors. In the present paper, a global analysis of prevalence rates of wheeze, allergic rhinoconjunctivitis and atopic eczema was performed in relation to diet, as defined by national food intake data.

Analyses were based on the International Study of Asthma and Allergies in Childhood (ISAAC) data for 6– 7 and 13 – 14 yr old children. Symptoms of wheeze, allergic rhinoconjunctivitis and atopic eczema symptom prevalence were regressed against per capita food intake, and adjusted for gross national product to account for economic development. Dietary data were based on 1995 Food and Agriculture Organisation of the United Nations data for 53 of the 56 countries that took part in ISAAC phase I (1994/1995).

The 13 – 14 year age group showed a consistent pattern of decreases in symptoms of wheeze (current and severe), allergic rhinoconjunctivitis and atopic eczema, associated with increased per capita consumption of calories from cereal and rice, protein from cereals and nuts, starch, as well as vegetables and vegetable nutrients. The video questionnaire data for 13 – 14 yr olds and the ISAAC data for 6–7 yr olds showed similar patterns for these foods.

A consistent inverse relationship was seen between prevalence rates of the three conditions and the intake of starch, cereals, and vegetables. If these findings could be generalised, and if the average daily consumption of these foods increased, it is speculated that an important decrease in symptom prevalence may be achieved.

Eur Respir J 2001; 17: 436–443.

Comparison of asthma prevalence in the ISAAC and the ECRHS

Pearce N, Sunyer N, Cheng S, Chinn S, Björkstén B, Burr M, Keil U, Anderson HR, Burney P, on behalf of the ISAAC Steering Committee and the European Community Respiratory Health Survey

Comparison of asthma prevalence in the ISAAC and the ECRHS, Pearce N, Sunyer N, Cheng S, Chinn S, Björkstén B, Burr M, Keil U, Anderson HR, Burney P, on behalf of the ISAAC Steering Committee and the European Community Respiratory Health Survey ©ERS, Journals Ltd 2000.

ABSTRACT

International and regional prevalence comparisons are required to test and generate hypotheses, regarding the causes of increasing asthma prevalence in various age groups worldwide. The International Study of Asthma and Allergies in Childhood (ISAAC) is the first such study in children and the European Community Respiratory Health Survey (ECRHS) is the first such study in adults.

Therefore, a comparison of the findings of these two surveys was conducted, for the 17 countries in which both surveys were undertaken.

There was a strong indication between the ISAAC and ECRHS prevalence data, with 64% of the variation at the country level, and 74% of the variation at the centre level, in the prevalence of "wheeze in the last 12 months" in the ECRHS phase 1 data being explained by the variation in the ISAAC phase 1 data. There was also generally good agreement in the international patterns observed in the two surveys for self-reported asthma (74% of country level and 36% of centre level variation explained), self-reported asthma before age 14 yrs (64% and 26%), hay fever (61and 73%) and eczema (41 and 50%).

Thus although there were differences in the absolute levels of prevalence observed in the two surveys, there is good overall agreement between the International Sudy of Asthma and Allergies in Childhood and European Community Respiratory Health Survey study findings with regard to international prevalence patterns. These findings, therefore, add support to the validity of the two studies, which provide a new picture of global patterns of asthma prevalence from child-to adulthood, and identify some of the key phenomena which future research must address.

Eur Respir J 2000; 16: 420-426.

ISAAC Phase Two

ISAAC Phase Two Objectives

1. To describe the prevalence of 'objective' markers of asthma and allergies in children living in different centres, and to make comparisons within and between centres;
2. To assess the relation between the prevalence of 'objective' markers of asthma and allergies and the prevalence of symptoms of these conditions in children living in different centres;
3. To estimate to what extent the variation in the prevalence and severity of asthma and allergies in children between centres can be explained by differences in known or suspected risk factors, including genetic determinants, or by differences in disease management; and
4. To explore new etiologic hypothesis regarding the development of asthma and allergies in children.

ISAAC Phase Two studies 9-11 years old children and involves skin prick testing, skin examinations, and measurements of serum IgE, genetic polymorphisms, lung function, bronchial hyperreactivity, and indoor allergen levels. It will also investigate variation in exposure and living conditions. The minimum sample size is 1,000. Some centres have done more. Since Phase II has a very demanding methodology it is conducted in a smaller number of centres than Phase One. These, however, are expected to be informative, as they have been selected on the basis of the ISAAC Phase One findings, e.g. centres with particularly high or low prevalence rates. To date 22 centres have completed Phase Two and 14 centres are still ongoing. A total of 36 centres in 22 countries are expected to complete the study. Below is an overview of the ISAAC Phase Two Centre, for added interest two maps, Phase Two Centres in Europe and worldwide are in the following pages.

Overview of ISAAC Phase Two Centres

Country, Centre	Completed	registered	Country, Centre	completed	registered
Albania, Tirana	yes	yes	Greece, Athens		
Barbados, Bridgetown			Greece, Thessaloniki		
Brazil, Porto Alegre			Iceland, Reykjavik		
China, Hong Kong	yes		India, Bombay Municipal		
China, Beijing	yes		India, Bombay Private		
China, Guangzhou	yes		Italy, Rome	yes	yes
Ecuador, Rural Area			Netherlands, Wageningen/Utrecht	yes	yes
Estonia, Tallinn	yes	yes	New Zealand, Hastings	yes	yes
France, Creteil	yes		Norway, Tromsø		
France, Bordeaux	yes		Portugal, Lisbon		
France, Clermond-Ferrand	yes		Spain, Cartagena	yes	yes
France, Strasbourg	yes		Spain, Almeria		
France, Marseille	yes		Spain, Madrid		
France, Reims	yes		Spain, Valencia		
Georgia, Tbilisi			Sweden, Linköping	yes	yes
Germany, Dresden	yes	yes	Sweden, Östersund	yes	yes
Germany, Munich	yes	yes	Turkey, Ankara	yes	yes
Ghana, Kintampo	yes		United Kingdom, West Sussex	yes	yes

The ISAAC Phase Two Data Centre (I2-CDC) is in Muenster and Stephan Weiland is the Phase Two coordinator. The data centre in Muenster is supported by funds from the European Union, which also covers collaborative laboratory analyses for 15 European centres. ISAAC Phase Two collaborative analyses are currently ongoing in the central laboratories in Stockholm (serum IgE, directed by Bengt Björksten), Oxford (genetic analyses, directed by Bill Cookson), Utrecht (indoor allergens, directed by Bert Brunekreef) and Wellington (indoor allergens, directed by Julian Crane). The Steering Committee would like to acknowledge and thank the contribution of ALK, who provided skin prick test allergens for free to Phase Two centres in low-income countries.

A detailed Data Coding and Transfer Manual have been prepared and is available from the ISAAC Phase Two data centre (I2-CDC) in Muenster. Phase Two fieldwork will be completed in all centres by the end of June 2001. A prepared data set must be received by the ISAAC Phase Two Data Centre (I2-CDC) in Muenster by the end of October 2001.

For further information:

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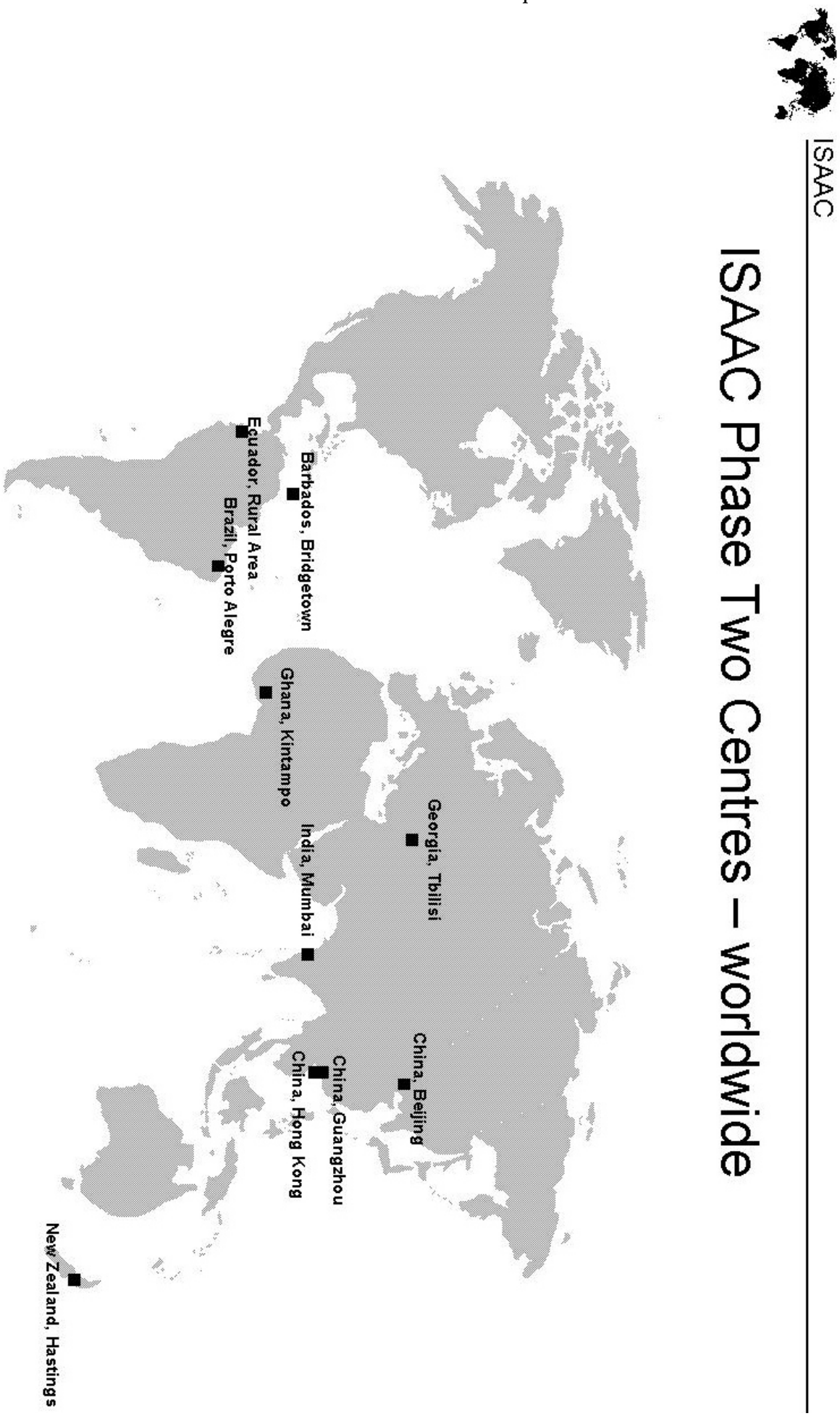
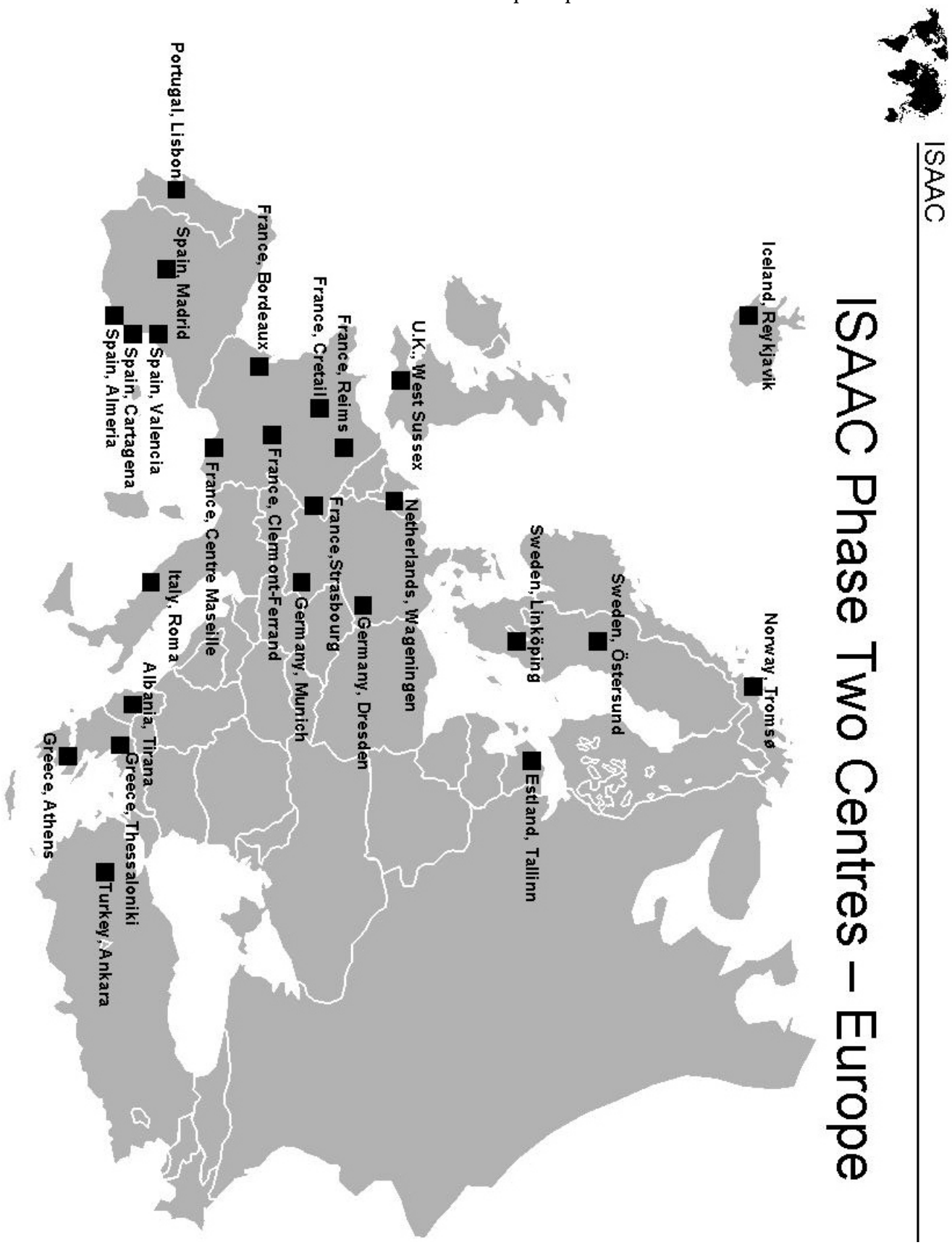
Phase Two Worldwide Map



Phase Two Europe Map



ISAAC PHASE THREE - UPDATE

Phase Three of the ISAAC programme started around the world in January 2001. From the 205 centres from 98 countries that had already expressed an interest in participating in ISAAC Phase Three, we have had 70 centres from 40 countries that have formally registered. We expect this number to rise as collaborators secure funding for their centres. Of the registered centres, 31 of the 70 centres are new ISAAC centres (they did not complete Phase One) and we also expect this number to rise as we have had enormous interest from centres that did not participate in Phase One.

As a result, the Steering Committee is confident that Phase Three will allow a determination of the trends in the prevalence of the symptoms of asthma, allergic rhinoconjunctivitis and eczema. Hopefully it will also provide more comprehensive worldwide prevalence data than was obtained in Phase I.

The extensive worldwide participation in Phase Three of the ISAAC programme has been strongly supported by a major research grant from GlaxoSmithKline, UK. This grant has been used to:

1 Support the international co-ordination of the programme through funding of the 10 regional co-ordinating centres.

2 Support the International Data and Co-ordinating Centres in their ongoing activities.

The other feature of Phase Three is the Environmental Questionnaire, which is recommended as an additional module to the Symptom Questionnaires. This module will enable data to be collected on established as well as novel risk factors at the individual level.

Professor Richard Beasley
ISAAC Steering Committee
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OCEANIA REPORT

ISAAC Phase One was done by six centres in New Zealand and four in Australia, but none in the rest of the Pacific. This time around, five New Zealand centres and three Australian centres will take Part in Phase Three. This is important in order to examine time trends in these countries. However, a second priority for Phase Three is to recruit new centres from throughout the Pacific. Dr Sunia Foliaki is co-ordinating this. He is from the Ministry of Health in Tonga, but plans (depending on funding) to be based in my research Centre in Wellington for the next two years.

I have recently come back from a meeting in Fiji with Dr Foliaki and other potential participants for ISAAC Phase Three Oceania. At this stage we have six Pacific countries that are definitely going to take part in Phase Three (New Caledonia, French Polynesia, Tonga, Samoa, Rarotonga, Cook Islands) and a number of other countries who are likely to participate (including the Solomon Islands, Vanuatu, Guam, Yap, Palau, and other countries from Micronesia (map next page). Eventually we should have 10-12 new countries. This is a fascinating part of the world with rapid economic and social change (i.e. westernisation) and large-scale immigration to countries (particularly New Zealand) that are already taking part in ISAAC and can provide comparative data for Pacific people. We are already working on plans to not only do Phase Three in the Pacific but to also produce publications comparing the findings in the Pacific with those in Pacific people in New Zealand, as well as with those in Maori (New Zealand) and Aborigines and Torres Strait Islanders (Australia).

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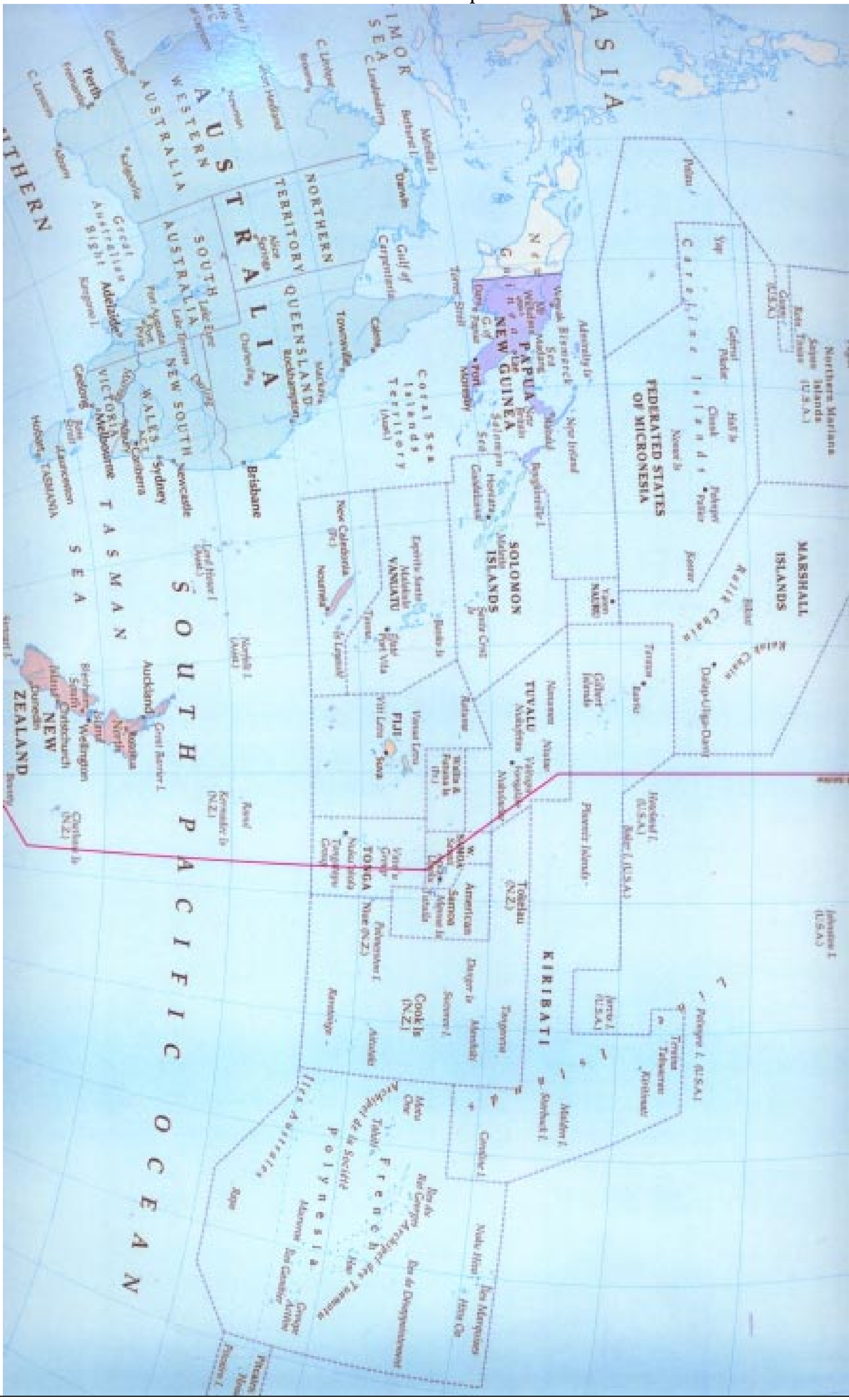
Oceania Map



AUSTRALIA
WESTERN AUSTRALIA
NORTHERN TERRITORY
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
PAPUA NEW GUINEA
SOLOMON ISLANDS
FEDERATED STATES OF MICRONESIA
MARSHALL ISLANDS
TUVALU
KIRIBATI
FIJI
TONGA
NEW ZEALAND
TASMAN SEA
SOUTH PACIFIC OCEAN
Coral Sea Islands Territory
French Polynesia
Perth
Adelaide
Melbourne
Sydney
Brisbane
Auckland
Wellington
Darwin

SUMMARY OF RELEVANT WEB PAGES: ISAAC WEB SITE MAINTAINED BY DR CARLOS DIAZ VAZQUEZ

The Web Site is called RESPIRAR (to breathe [thanks to Javier for the definition]) and appears to include a wide range of material concerning asthma of interest to doctors and lay people, aimed at a Latin American audience. The introductory page includes links to a range of topics, which are organised into broad groups such as 'Principles' and 'Evidence'. Under the 'Principles' section there is a link to a page, which discusses asthma epidemiology and briefly describes several epidemiological studies including ISAAC. The summary of ISAAC includes indications of the range of prevalence found during Phase One, and a good quality image of a map showing prevalence in Latin America and Spain and Portugal. A link from this section leads to a section known as the ISAAC Observatory.

The ISAAC Observatory includes the following sections:

- A brief summary of ISAAC.
- An explanation of the role of the ISAAC Observatory.
- A list of ISAAC publications by subject and location.
- A list of ISAAC publications by year of publication.
- A link to a section of the RESPIRAR web site presenting detailed results of Phase One for Spain.
- A link to a section of the RESPIRAR web site presenting detailed results of Phase One for Latin America.
- A brief description of the content of the ISAAC web site and a link.

The brief summary of ISAAC describes the structure and the major phases of ISAAC.

The role of the ISAAC Observatory appears to be to develop and maintain a comprehensive ISAAC bibliography. The papers included are those listed in Medline. The ISAAC Observatory also presents ISAAC results for Latin America and Spain and Portugal. Dr Vazquez has received assistance from Luis Garcia Marcos (ISAAC National Co-ordinator, Spain).

The lists of publications appear comprehensive and are well organised.

The summary section for the Spanish results presents information about the Spanish ISAAC program and the principle investigators, and includes a series of histograms showing the data for a variety of variables, for both age groups.

The summary section for the Latin America results is broadly similar to the Spanish section but uses tables of prevalence values to present the data instead of histograms.

The description of the ISAAC web site includes a list of bullet points concerning major features of the web site.

Dr Carlos Diaz
http://www.infodoctor.org/respirar/index.htm

ENGLISH SUMMARY
RESPIRATORY SYMPTOMS AND ASTHMA IN THE PROVINCE OF ANTWERP

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During the last few decades it seems that asthma and allergies have been on the increase. This is suggested not only by a rise in real occurrence but also by a greater scientific and public interest in this problem. Two large international studies on the occurrence of asthma and allergy have started. The European Community Respiratory Health Survey (ECRHS) investigating adults and International Study of Asthma and Allergies in Childhood (ISAAC) studying 6-7 and 13-14 year old children. The University of Antwerp (UIA) was the only Belgian centre to participate in these studies and two study areas were used: the centre of Antwerp (urban) and 13 municipalities south of Antwerp (suburban).

In this thesis a further investigation into this increase in asthma and allergies was performed by an extensive review of the literature. The literature was reviewed for time-related changes in currently available 'objective' assessments of asthma and allergy (testing of allergy, spirometry, bronchial hyperresponsiveness). This search found only 16 publications. Of these only eight used exactly the same 'objective' measurements twice and only four of them found an increase. However, there were many studies which found an increase in the (subjective) reporting of respiratory symptoms or an asthma diagnosis. Since only eight publications report on a time-related increase in 'objective' measurements, further research is necessary to document the increase in occurrence of asthma and allergy properly.

In 1991 and 1992, two centres in the Antwerp region participated in the screening phase of the major worldwide ECRHS study. Higher occurrence rates of respiratory symptoms and asthma were found in urban compared to suburban Antwerp. Subsequently, four other areas in the Antwerp region were also investigated, using virtually the same methodology. Occurrence rates in two rural areas (Essen and Kasterlee) were low and comparable to the rates in suburban Antwerp, while occurrence rates in two industrialised harbour areas (Berendrecht-Zandvliet and Zwijndrecht) were much higher and comparable with those of urban Antwerp. Adjustment for several personal risk factors hardly affected the area differences and these were thus unlikely to account for them.

Shortly after the 1991-1992 screening phase, the more extended phase II of the ECRHS was performed in urban and suburban Antwerp. This resulted in more detailed information on a large number of risk factors and some more objective measurements of respiratory outcome parameters. The higher occurrence rates of asthma symptoms in urban Antwerp were confirmed by a higher prevalence of bronchial hyperresponsiveness and allergy to house dust mite. However, none of the many personal risk factors investigated, or all the risk factors together, could completely explain the urban-suburban differences for the prevalence of symptoms in the previous 12 months. However, the difference in the occurrence of 'ever having had asthma' could largely be attributed to the difference in occurrence of house dust mite allergy between the areas. Since in nearly all subjects reporting 'ever having had asthma' the disease had started before the age of 16 years, house dust mite allergy appeared to be a major risk factor for childhood asthma, whereas other factors, responsible for the difference in the persistence of symptoms in adulthood, could not be identified.

The strong indication that childhood asthma was playing an important role in the area differences increased the interest of the Antwerp asthma research group in the occurrence of respiratory symptoms in children in these areas. The participation in the ISAAC study in 1995/1996 therefore provided a good opportunity to investigate occurrence rates in these areas within an international context. We found large gender and age-related differences in the occurrence of respiratory symptoms. Boys aged 5-8 years had more symptoms than girls of the same age, whereas girls aged 12-15 years reported more respiratory symptoms than boys. Underreporting for 12-15 year old boys seemed to be an explanation for this.

In 1996, a repeat of the screening phase of the ECRHS was performed in 20-44 year old subjects in urban and suburban Antwerp. Simultaneously a screening phase, still using the same methods, was carried out in a random sample of 45-75 year old subjects. The previously found area differences in 20-44 year old subjects were confirmed and a similar area difference was also found in the older age group. However, in the 5-8 and 12-15 year old children (ISAAC) no area differences had been found between urban and suburban Antwerp. Adjustment for a number of personal risk factors again failed to explain the area differences in the adults. This seemed to indicate that there is an age-related area difference in the occurrence of respiratory symptoms and asthma. An explanation for this could be (traffic-related) air pollution, but this could not (yet) be studied due to insufficient air pollution data.

Occurrence rates of respiratory symptoms and asthma were around the mean for all the ECRHS and ISAAC participating countries. Occurrence rates for adults in suburban Antwerp were among the lowest within the ECRHS. The large area differences found in Antwerp showed that estimations of occurrence rates for a whole country, based on measurements in one specific area, should be interpreted very cautiously.

Two new studies have been set up, taking into account the methodological shortcomings of the previous studies. These studies are: the PIPO-study (Prospective study on the Influence of Perinatal factors on the Occurrence of asthma and allergies in newborns) and the ECRHS II (follow-up of the ECRHS).

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COURSE OUTLINE

1. **Introduction to Principles and Methods of Epidemiology**
   Julie Buring, Harvard University, Boston
2. **Introduction to Biostatistics for Epidemiologists**
   Carol Bigelow, University of Massachusetts, Amherst
   Jürgen Wellmann, Dirk Taeger, Universität Münster
3. **Cancer Epidemiology**
   Philip C. Nasca, University of Massachusetts, Amherst
4. **Intermediate Statistics for Epidemiological and Medical Application**
   Lloyd Chambless, University of North Carolina at Chapel Hill
5. **Methodology in Clinical Trials**
   Lawrence Friedman, NHLBI, Bethesda
6. **Epidemiology of Asthma and Allergies**
   David Strachan, St. George's Hospital, Medical School, London
   Stephan Weiland, Universität Münster

Computer-Lab is planned

Evening Lecture: Primary and secondary prevention of CHD: results from MONICA and EUROASPIRE I and II.

FEES	1 COURSE	2 COURSES
Fellows	DM 450 / □ 225	DM 900 / □ 450
DAE members	DM 400 / □ 200	DM 800 / □ 400
Public Health students	DM 300 / □ 150	DM 600 / □ 300
Undergraduate students	DM 100 / □ 50	DM 100 / □ 50

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