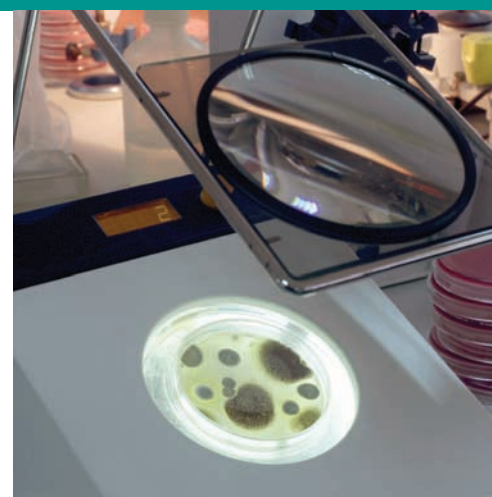




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**Public Health Research
in Barcelona**

**From the Municipal Institute
to the Public Health Agency**
Scientific Report
1997-2002





Agència de Salut Pública

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Foreword

Imma Mayol i Beltran

President of the ASPB

The recent creation of the Barcelona Public Health Agency (ASPB), whilst continuing along the same lines as the Barcelona Municipal Institute of Public Health, is an opportunity to reinforce those aspects that have made this centenarian institution a benchmark in the field of public health services in Spain and Europe. Of these aspects, one that stands out is the fact that, for many decades, this institution has been able to associate the provision of high quality services and response capacity with the development of top level research and teaching activities.

As in other health areas, the managers and technical experts that staff the Barcelona Public Health Agency understood some time ago that research linked to the provision of services is a very powerful tool for promoting excellence in professional practice.

Research, both because it allows new knowledge to be generated in response to questions and challenges that are important for public health, and because it implies collaboration between professionals and institutions, is a fundamental factor in the motivation of organisations and their technical staff, and contributes decisively to the quality of the services provided. This has led to the shaping of highly motivated professionals and researchers who, in a rather unfrequent manner in the context of public health organisations around the world, are a rare combination of intellectual rigour and curiosity with a practical and necessarily realistic attitude that places them at the forefront of services for the citizens of our community. It has also been the school that trained many grantholders who are now professionals working in other institutions and who form part of a solid network that always seeks excellence in public health.

This context, which combines critical analysis with effective action, has also been the source for innovative initiatives, many of which have allowed a response to emerging problems, as well as the updating of the catalogue of services to adapt it to the needs of any given time. Finally, it should be acknowledged that our research activities have contributed towards our position in the international arena, reinforcing our relations with groups and institutions of great prestige.

For all these reasons, this 1997-2002 scientific report comes at a historical moment for our institution and it is a very important element of reaffirmation on behalf of public health services of a high quality and a considerable degree of recognition from both health and social sectors.

The retrospective view that readers will find in this document is an example of our commitment to citizens to strengthen an institution responsible for guaranteeing optimal health levels for all. At the same time, it is proof of the recognition that we give technicians and researchers who every day make it possible for research and teaching to be a fundamental pillar of their work. To all of them, my congratulations for what has been achieved over these years, and my encouragement to continue working for research to be a capital element in an increasingly better service for our city, its inhabitants, and its visitors.

Introduction

Antoni Plasència i Taradach

Director of Research and Teaching

Joan Guix i Oliver

Executive Director General

Unlike the long tradition in the hospital, and more recently, in primary healthcare, the link between the provision of health services and research was not a reality in public health organisations until quite recently. In fact, even today, those public health organisations explicitly including research activities within their mission and vision are few. One notable exception is the Barcelona Public Health Agency (ASPB), previously known as the Municipal Institute of Public Health (IMSP), which, since the 1980s, has promoted and consolidated the development of research as a tool for good professional practice, as included in the formulation of its mission and vision.

This scientific report is intended to be a summary of the research activity carried out during the period 1987-2002. It starts during the phase of creation of the IMSP, which brought together different municipal bodies that were previously part of the Public Health Area, and ends with the creation of the ASPB, which confirmed the joint shouldering of responsibility by the Catalan Government for the provision of public health services, within the framework of the Barcelona Health Consortium (CSB).

This document follows on from previous reports on research carried out at the IMSP. On this occasion, however, a special effort has been made to present the research and teaching activities grouped by subject areas and lines, in accordance with a progressive consolidation of the capacity to generate new knowledge in relevant areas that are closely linked to the portfolio of services offered by our organisation. In this regard, prominent areas featured are those relating to determinants of health (especially lifestyles), to health problems (communicable diseases, maternal and child health, cancer, accidents and injuries, and psychosocial risk and mental health), health policy and services, international health and other issues relating to

methodology. In addition, this report includes information on the organisational and financing aspects of research, which have also seen progressive development during this period and without which we could not really speak of true research. Finally, the report presents the teaching and training activities offered in cooperation with different academic institutions in the city, making up an outstanding range of specialised training in the field of public health and the different disciplines that it involves.

The overall balance for the 1997-2002 period can be considered as very favourable and it indicates consolidation of research lines and teams, with continual finance and high levels of production. At the same time, it is important to mention the fact that these research activities have been associated in many cases with the training of research staff, which increases the returns to society of the benefits of research. Finally, an additional value of these activities has been the introduction of innovations in the provision of services, tackling the changing needs of our environment as regards the response of public health services and contributing to broaden different aspects of our portfolio of services.

Achieving all of this has not been easy, and it has been possible because a large number of our professionals have had the initiative, skills and the motivation necessary to take on the challenges involved in the day to day of research, which does not always respect timetables nor offer tangible incentives. At the same time, the ASPB/IMSP has also taken on board, at times with difficulties, the administrative and legal obstacles that are found by a Public Administration organisation whose central objective is not the development of research. However, these difficulties, rather than making us renounce our research, fill us with confidence with a view to the challenges of the most immediate future.

These challenges include recognising the strong and growing competitiveness of national and international research groups for obtaining an ever-scarce volume of resources, committing to reinforcing scientific specialisation, promoting interdisciplinary and multi-centre collaboration, and equipping the organisation with the management flexibility necessary to give support to the adequate development of scientific projects. In this regard, the recent news of the inclusion of different ASPB research groups within the proposals financed by the Thematic Networks of Cooperative Investigation of the FIS (National Health Research Fund), including the Network of Centres of Epidemiology and Public Health (RCESP), the Network of Health and Gender (SALIG) and the Network of Addictive Disorders (RETA), is an excellent piece of news, which has to encourage us to continue tackling and renewing with enthusiasm, rigour and creativity the key role played by research in relation to public health practice.

The scientific perspective at the ASPB

The Barcelona Public Health Agency (ASPB) is the institution responsible for public health in the city of Barcelona. The ASPB's origin lies in three centenarian organisations: the Municipal Laboratory of Barcelona, founded in 1889, the Municipal Institute of Hygiene, created in 1891, and the Municipal Veterinarians Organisation, born in 1899. The union of these three institutions, together with other services and structures, made up the municipal public health services, which in the 1980s –after the recovery of municipal democracy– were included within the Public Health Area, including the Municipal Health Institute (IMS) the Municipal Laboratory, the Operating Unit for Food Hygiene and Zoonosis, and the Plan for Treating Drug Addiction. In 1997, the Municipal Public Health Institute was constituted, and in 2002 it merged with the structures originating from the Government of Catalonia (Generalitat), thus creating the ASPB. In addition to the direction and management of public health centres and services in the city of Barcelona, the ASPB has also taken over the management of services of the Generalitat that are directly designed for the city of Barcelona.

The ASPB emerges from the Barcelona Municipal Charter, in which it is configured as an independent body, with stakes held jointly by the Barcelona City Council and the Generalitat de Catalunya, as part of the Barcelona Health Consortium. In addition to its role supporting the exercising of local health authority, its main functions are:

- To monitor of the state of health of the population and its main determinants.
- To develop policies to improve the population's health status.
- To guarantee the provision of services.

These functions are developed in the areas of health protection and promotion, epidemiological surveillance and care for drug addicts.

Mission and vision

The ASPB's mission is to care for the health of Barcelona's citizens and visitors, especially through:

- The evaluation of the health needs of the general population, including special risk sub-groups.
- The development of policies and actions for preventing and controlling disease, as well as the promotion and protection of health.
- The guarantee of equal access for all citizens to services that allow them to maintain and improve their state of health.
- The contribution to the development of a sustainable environmental and social setting for health.

The ASPB aspires to excellence in the operation of its services, so that citizens are guaranteed maximum performance from resources. Its functioning is based on the qualification and motivation of its staff, through dynamic and demanding management, and in the explicit and public definition of its objectives, portfolio of services and production and financial results.

The ASPB wants to integrate the concept of "good practice" into public health through the promotion of actions based on evidence and evaluation, as well as research and training, aspiring to project, together with the academic institutions, its contribution to health.

The ASPB wants to reinforce intersectorial leadership in action on health in the city, in interaction with other institutions and community organisations that can contribute to its aims, whether publicly owned or not. Its vocation is one of collaboration with all of these services, for which reason it will always seek the most appropriate formulas for fulfilling its mission.

The ASPB's vision is to be an organisation of reference in the field of management, research and innovation in public health, on a European scale, with high levels of effectiveness and efficiency, and to tend towards excellence in its products and services.

As contained in its mission and its vision, research, understood as the set of systematic processes that aim to generate new knowledge that can be generalised, constitutes a key activity of the ASPB. Research is configured as a fundamental element of support for good professional practice, through the introduction of innovations as a mediating element, which is resumed in the RIS (research-innovation-service) culture of the ASPB (see diagram, page 12). In turn, this practice is structured around the ASPB's portfolio of products and services, and it includes the concepts of:

- a) evidence-based public health;
- b) introduction of innovations;
- c) continuing internal and external assessment;
- d) dissemination of new knowledge; and
- e) periodic reviews of the services portfolio with new products and services.

In this sense, the ASPB is to public health what hospital and primary care services are to individual health problems. In a similar way to the key role that such services have in clinical research, the ASPB is a privileged setting for the development of research activities closely linked to public health and community health actions that are developed by the ASPB.

Objective of the scientific report

The main objective of this document is to present, in a structured and synthesised form, the main research and teaching projects and products carried out from the IMSP in the six years of its existence (1997-2002), until it recently became the current ASPB.

Following on from some prior documents on research carried out at the IMS in the first half of the 1990s^{1,2}, this document makes reference to the entire organisation and tackles both the different lines of research –including its organisational and financing aspects–, and the resulting products.

Complementarily, it also describes the different teaching products that have been gradually consolidated based on research activities and the practice of public health in its different aspects.

The document is structured around five main issues:

- The organisational forms of the research.
- The areas of research, grouped by subject.
- The funding of projects, according to the sources involved.
- The scientific production, mainly focussing on publications.
- The teaching and training activities.

The organisation of research

The activities of research and teaching are the responsibility of the Directorate of Research and Teaching, a transversal responsibility, as can be seen on the chart on page 14. For the realisation of its operations, the Directorate of Research and Teaching especially enjoys the close participation of a Research Committee, together with the Resources Directorate, through which those aspects linked to contracts, grants, financial aid and legal advice are managed. It must be highlighted, however, that the Communication, Library, Information Technologies and General Services areas also provide fundamental support for the different aspects of research. The

contribution of the different activities involved is structured and centralised around a set of Grant Regulations, approved by the ASPB's Governing Board. Finally, the development of research activities follows the criteria of good scientific practice developed by the Municipal Institute for Medical Research (IMIM).³

Subject areas and lines of research

As the different research groups and lines have become consolidated around the services portfolio, it has been the units and the services themselves that until now have framed the development of a good part of the research projects. However, a growing transversal thematic collaboration has been taking place, superseding formal organisational areas and allowing the incorporation of complementary technical profiles, increasing the multi-disciplinary nature of public health research (see index of researchers on pages 70-71).

This collaboration allows the research activity to be structured into diverse subject areas, which constitute the backbone of research at the ASPB/IMSP. These subject areas make up a specialised set of skills and scientific and teaching products on which the competitiveness and scientific excellence of our organisation are based. In short, the major areas have been grouped into six main groups:

- determinants of health
- health problems
- inequalities in health
- health policy and services
- international health
- methodology

In turn, each of these subject areas is divided into different specialised lines and sub-lines (see the details from page 19 onwards).

More recently, in order to consolidate and give specific visibility to the more strategic lines of research, and within the framework of the new creation of Thematic Networks for Cooperative Research by the Health Research Fund (FIS) and the Ministry of Health, the ASPB is

participating in the Thematic Network of Centres for Epidemiology and Public Health (RCESP) through three research groups:

- Group 1: health information systems and social epidemiology.
- Group 2: epidemiology and control of communicable diseases and public health emergencies.
- Group 3: preventive and health promotion policies and interventions.

In addition, the lines of research into drugs and gender inequalities are integrated into the Network for Addictive Disorders (RETA) and the Network of Health and Gender (SALIG) of the FIS. Finally, one of the aspects of the line of research in maternal and child health, congenital defects, is participating in the Epidemiological Network of the Programme for Research into Rare Diseases (REPIER).

It should be pointed out that each of these areas, lines and sub-lines includes complementary approaches of the different public health disciplines, including epidemiology, information systems, analytical methods, and the evaluation of preventive and health promotion interventions. Complementarily, in many cases the different lines make reference to specific community areas, such as employment, education, health and social services, road safety and grass-root associations.

¹ Municipal Health Institute. *Recerca i desenvolupament de nous programes*. Barcelona City Council, Public Health Area, 1992

² *Recerca i desenvolupament de nous programes*. "Documents" Series, 8. Barcelona City Council, Public Health Area, 1994.

³ *Codi de bones pràctiques científiques*. IMIM, IMAS. Barcelona, June 2002 [available at: <http://www.imim.es/imim/cat/CBPC.htm>]

**Portfolio of products and services
of the Public Health Agency
of Barcelona**

2003

(Approved by the Governing Board
on 4 February 2003.)

Health information systems

- 1 Drug addictions information system
- 2 Maternal and child health information system
- 3 Vital statistics
- 4 Road traffic injuries information system
- 5 Workplace accidents information system
- 6 Environmental health information system
- 7 Integrated health information system
- 8 Health surveys

**Epidemiological surveillance
and intervention**

- 9 Tuberculosis prevention and control programme
- 10 Surveillance and control of meningitis and hepatitis
- 11 HIV/AIDS surveillance
- 12 Surveillance and control of other communicable diseases
- 13 Surveillance and control of outbreaks
- 14 Surveillance of occupational health

Prevention and health promotion

- 15 Breast cancer screening programme
- 16 Continuing vaccination plan
- 17 Smoking prevention and control
- 18 Health education in schools
- 19 Support for schools on other health issues
- 20 Support for mutual support organisations
- 21 Maternal and child health
- 22 Training in work safety
- 23 Workplace prevention programmes

Care for drug addictions

- 24 Out-of-school community programmes
- 25 Treatment programmes at municipal centres
- 26 Programmes with substitute substances
- 27 Organic attention programme
- 28 Risk reduction programmes
- 29 Residential programmes
- 30 Educational workshops and programmes

Food safety and hygiene

- 31 Sanitary control of central markets
- 32 Sanitary control of the central abattoir
- 33 Control of wholesale food companies and establishments
- 34 Sanitary control of retail establishments and municipal markets
- 35 Sanitary control of collective catering establishments
- 36 Control and inspection of food-related activities on open spaces
- 37 Response to alerts, complaints and outbreaks

Control of zoonosis and vectors

- 38 Control of urban fauna
- 39 Constitution of stable feral cat colonies
- 40 Custody of animals at the municipal centre
- 41 Adoption of pet animals
- 42 Hygiene of public areas and municipal buildings

Laboratory

- 43 Support for food surveillance programmes
- 44 Support for drinking water consumption control programmes
- 45 Support for environmental control programmes
- 46 Support for the epidemiological investigation of outbreaks
- 47 Pharmacological productions

Health coordination and liaison

- 48 Coordination with other sectors of the municipal administration
- 49 Coordination with other administrations and health services planning
- 50 Coordination and support in health for the municipal services of the districts
- 51 Guidance on drug addiction (district security boards, security forces)
- 52 Contribution to the Environmental Board according to demands
- 53 Communication to the public and professional social sectors
- 54 Other municipalities, Associations of municipal authorities (FMC and FEMP) and Healthy Cities
- 55 World Health Organisation collaborative centres
- 56 Municipal policies on drugs and health (European Union and others)
- 57 International Cooperation

External projects

- 58 According to project and contract

Projects financed

In the period referred to by this report, a total of 56 new research projects were financed, with an annual average of 26 active projects (see table 1 and graphic 1 on pages 61 and 62). The distribution by subject area of the projects is summarised in graph 3 of page 63, where it can be observed that the most active areas were those relating to health problems (especially communicable diseases), to determinants of health (especially smoking, drugs and alcohol), and to health inequalities.

The financing of these projects has meant a total sum in the same period of 1,600,000 euros (266,000,000 pesetas), equivalent to an annual average of 270,000 euros (44,000,000 pesetas) with a global tendency towards growth of the annual amount assigned (see graph 6 on page 68).

Scientific production

Briefly, it is notable that in the period between 1997 and 2002, a total of 229 scientific publications were generated and published in indexed scientific journals. This amount means some 38 articles published each year. By subject line, it is observed that the areas and lines that have published most are those relating to health problems (especially communicable diseases), determinants of health (mainly smoking, drugs and alcohol) and to inequalities in health. On pages 64 to 67 this information is also detailed for each of the subject lines and sub-lines (see tables 2 to 7 on pages 64 to 67).

Teaching and training activity

Many of the diverse projects financed have allowed the training of research staff, especially of pre-doctoral scholarship holders. In the period 1997-2002, around thirty scholarship holders were trained (see the index of scholarship holders on pages 72 and 73). The training received has, in several cases, allowed for doctoral and masters degree theses to be written. Some scholarship holders maintain their links with the ASPB whilst others have joined

other National Health System organisations.

The teaching offer of the ASPB/IMSP, of which more details are given in the respective specific section (see pages 55 to 58), was developed initially in response to the absence of regulated training in the field of public health in Catalonia. To tackle this shortage, in the mid 1980s, an academic agreement was signed with the Public Health School of the Johns Hopkins University in the United States –considered the world's foremost public health school–, for the programming of intensive courses taught by internationally acclaimed teachers. This agreement, which has been constantly renewed to the present day, has facilitated the presence of prestigious academics in the city of Barcelona, with nearly 80 courses and seminars taught since the start, and the contribution in the form of courses and consultancies of some 23 teachers in the period 1997-2002 (see page 59). Moreover, in recent years, the agreement has included the possibility of spending a short time training at the School of Public Health of the Johns Hopkins University, and this has benefited several ASPB/IMSP professionals.

As a complement, courses were started, taught by different professionals from the ASPB/IMSP, and addressed to both researchers and public health professionals from the different administrations. The consolidation of these courses has meant that in some cases they have been integrated into the teaching programmes of the city's academic institutions, especially in doctoral and master's degree programmes. In this respect, and reflecting the continued will of the ASPB/IMSP to strengthen its alliances with academic institutions, part of this teaching offer is included in the Master's Degree in Public Health offered by the Pompeu Fabra University, as it had previously been in the Master's Degree in Public Health offered for a few years by the University Institute of Public Health of Catalonia, a consortium attached to the University of Barcelona, of which the Barcelona City Council was a member. In addition, some courses from the ASPB/IMSP teaching offer form part of the doctoral programmes at the Autonomous University of Barcelona. The ASPB/IMSP has also been linked to this

university for the last decade through an academic agreement for undergraduate training in the subjects of Epidemiology and Public Health and Preventive Medicine in the Medical degree programme within the framework of the Teaching Unit of the Hospital del Mar, of the Municipal Health Care Institute (IMAS).

In collaboration with the University of Barcelona, the Autonomous University of Barcelona, the Pompeu Fabra University and the Polytechnic University of Catalonia and other academic institutions, the teaching offer also includes the possibility of work practice placements in different ASPB/IMSP services for students of disciplines such as veterinary science, biology, chemistry, agriculture and public administration.

Finally, it should be mentioned that, as a result of the collaboration between the Pompeu Fabra University, the IMAS (Municipal Health Care Institute) and the ASPB/IMSP, the Teaching Unit for Preventive Medicine and Public Health has recently been approved, and this will train medical residents within the MIR programme from the year 2003 onwards. Amongst other activities, these medical residents will spend at least one entire year in practical training in public health at the ASPB/IMSP.

Research at the ASPB, as previously at the IMSP, is possible thanks to a transversal thematic collaboration that goes beyond the organisational structure, which makes multidisciplinary research complemented by different institutes, services and groups a possibility.

Thus, research activity at the ASPB/IMSP is organised into six major subject areas:

- determinants of health
- health problems
- inequalities in health
- health policy and services
- international health
- methodology

The activity of these major areas is developed broadly in this chapter; within each major area the main lines and sub-lines of research are described. It is important to point out that the collaboration between different areas and lines means that on occasions it is difficult to classify certain projects and the corresponding publications in a single area. To avoid duplications, the publications and projects that correspond to more than one area have been included in the activity of the area most closely involved in the project's management.

Within each sub-line of research, the information is presented chronologically from the year 1997 to the year 2002. Firstly there are the "scientific projects" that have been carried out over this time. For each of them, details are given on the main researchers, the title, the source of financing, and the duration. Next, details are given on "Publications in indexed magazines" which include all the original articles and publications that can be consulted on Medline via the Internet, independently of the publication language or its impact factor. The names of authors as published on Medline, have been respected, despite some spelling errors, in order to facilitate the search for them.

The third section in each line or sub-line refers to "Other publications", in other words, publications that although they are not indexed on Medline, are a useful vehicle for the results of ASPB/IMSP research, in addition to chapters of books written totally or partially by ASPB/IMSP

researchers. Not included, however, are communications nor congress proceedings, even though the participation of different groups of researchers in congresses, conferences and meetings of scientific societies is a constant, both in very consolidated and new emerging lines.

Lastly, two final categories of classification are included under the titles of "Doctoral theses and dissertations", which includes those theses directed and carried out within the mentioned period, and "Prizes and others".

All this information is included in graphics that show how the scientific production has evolved in a global way and, in more detail, by subject areas, which are reproduced in the annexes (see pages 62 and 63).

Subject Areas

21	Health Determinants
21	Lifestyles
21	Smoking
23	Drugs and alcohol
24	Other habits
25	Determinants of health according to age group
26	Environmental health and food safety
29	Health Problems
29	Communicable diseases
29	HIV/AIDS
31	Tuberculosis
33	Vaccinations
34	Epidemic outbreaks
35	Other communicable diseases
36	Maternal and child health
38	Cancer
39	Accidents and injuries
41	Work, mental health and psychosocial risk
43	Health Inequalities
43	Gender inequalities
44	Socioeconomic inequalities
47	Health Policy and Services
49	International Health
51	Methodology
51	Methodology in Public Health
52	Scientific publishing

1 Determinants of Health Area

Lines of research

The Determinants of Health Area groups together three lines of research. The first corresponds to the identification of determining factors for adopting high risk behaviours associated with **lifestyles** (toxic habits, physical activity, eating habits, etc.). In second place, the identification of conducts and risk factors for health according to **age group** (adolescence, youth, old age, etc.). And finally, the study and control of **environmental factors** that are determinants for the population's health (water, air, zoonosis, etc.).

Lifestyles

Strategic Objectives

- Study of the main risk factors in relation to lifestyles, such as smoking, alcohol and drugs, eating habits and physical activity, with the aim of identifying trends and analysing the associated environmental and behavioral factors, which allow the design of the corresponding preventive interventions.
- Design of interventions in primary prevention for risk factors associated with lifestyles, directed to the environment and predisposing factors, facilitators and reinforcers of high-risk behaviours.

*(See projects and publications:
Smoking: pages 21-22
Drugs and alcohol: pages 23-24
Other habits: page 24.)*

Determinants of health according to age group

Strategic Objectives

- Evaluation of the influence of age as a determining factor for health. Determination of which are the risks for health when taking into account age and its associated conducts: sexually transmitted diseases (STD), HIV and unwanted pregnancies in teenagers.
- Evaluation of community interventions for promoting health directed at specific age groups.
- Consolidation of the methodology and procedures for the development of innovative interventions in the area of health education and the promotion of health, especially in children and adolescents.

(See projects and publications: pages 25-26.)

Environmental health and food safety

Strategic Objectives

- Fast and reliable response to demands for analysis of water, air, and food, as well as any abnormality detected in relation with animals in Barcelona, and guaranteeing the analytical quality.
- In-depth study of enteropathogens in water and food, enterobacteria resistant to antimicrobial agents and bacteriophages in drinking water supplies.
- Identification of the effects of environmental contamination on the population's health, including cigarette smoke and different atmospheric pollutants.

(See projects and publications: pages 26-27.)

2 Health Problems Area

Lines of research

The Health Problems Area includes a line of research into **communicable diseases**, together with other priority health problems. The Communicable Diseases Group was created in 1986, coinciding with the drive to improve the compulsory reporting system for certain illnesses (especially **HIV/AIDS**, **tuberculosis**, meningococcal disease, important diseases, etc.), which in turn encouraged studies on these illnesses. This heading also covers the study and management of epidemic outbreaks, community actions in relation to the **Vaccination Plan** and a whole series of infectious diseases that are grouped under the name of **other communicable diseases** (*Haemophilus influenzae*, meningococcal disease, etc.).

Other lines in this area are related with other especially significant health problems, around which different community health actions are based aimed at specific populations in a vulnerable situation, such as **maternal and infant health** and **accidents and injuries**, and which include actions carried out by community organisations through grants and those carried out using own funds. More recently, research into **cancer** has started, linked to the reinforcement of monitoring activities and those of primary and secondary prevention.

Finally, linked to the health actions aimed at the working population, psychosocial risk factors are identified related with the **state of health of different workers' groups** and the possible interaction between **mental health**, **psychosocial risk factors** and the **work setting** are analysed.

Communicable diseases

Strategic Objectives

- Design and evaluation of interventions to prevent the adoption of risk behaviours, with respect to new cases of specific diseases.
- Validity and exhaustiveness of systems for monitoring of vaccine coverage.
- Determinants for complying with the vaccination calendar.
- Study of the relationship HIV/AIDS-tuberculosis and drug addictions and implications for their control.
- Development of systems for measuring the evolution of tuberculosis and the fulfilment of its treatments.
- Identification of the most useful control measures and most suitable research protocols in the case of an epidemic outbreak.
- Study of the epidemiology of emerging diseases.

*(See projects and publications: HIV/AIDS: pages 29-30
Tuberculosis: pages 31-33
Vaccinations: page 33
Epidemic outbreaks: page 34
Other communicable diseases: page 35.)*

Maternal and child health

Strategic Objectives

- Design of a plan of community health actions addressed to specific populations in a situation of special vulnerability, such as women of childbearing age, pregnant women, newborn and small children.
- Analysis of factors related with birth control, birth and postnatal issues (low birth weight, premature birth, teenage pregnancy, birth control).
- Early detection and study of congenital defects in newborns.

(See projects and publications: pages 36-37.)

Cancer

Strategic Objectives

- In-depth study into the epidemiology of cancer and its main determinants in the city.
- Evaluation of the impact of primary and secondary prevention interventions on cancer trends.
- Development and consolidation of relevant information systems and measuring instruments.
- Collaboration in the evaluation of the quality of care provided for oncology patients.

(See projects and publications: page 38.)

Accidents and injuries

Strategic Objectives

- In-depth study of the epidemiology of accidents and injuries and their main determinants, especially as regards road and household injuries.
- Evaluation of the impact of primary and secondary prevention on accident trends and their impact on health.
- Development and consolidation of relevant information systems and measuring instruments.
- Collaboration in the evaluation of healthcare and rehabilitation care for injured patients.

(See projects and publications: pages 39-40.)

Work, mental health, and psychosocial risk

Strategic Objectives

- Analysis of the relationship between work and health.
- Analysis of work-related gender inequalities in health.

(See projects and publications: page 41.)

3 Health Inequalities Area

Lines of research

Within the framework of innovation in public health policies oriented towards the reduction of social inequalities in health, work is fundamentally being carried out on the study of **socioeconomic inequalities** in health, both in Barcelona and in Spain. Also analysed are inequalities between men and women deriving from the different social roles assigned to them, **according to their sex**, as well as an in-depth study of the interaction between gender, family roles, the work situation and social class, and geographical inequalities.

Gender inequalities

Strategic Objectives

- Study of the inequalities in health between men and women derived from the social roles assigned to them according to gender; description and cause of inequalities and evaluation of interventions.
- Study of inequalities with respect to the family role and work situation according to gender.

(See projects and publications: pages 43-44.)

Socioeconomic inequalities

Strategic Objectives

- Determination of the role played by sociocultural and economic level both in the development of illnesses and the perception of health.
- Study of socioeconomic differences with respect to the evolution of mortality and morbidity.
- Determination of the role played by geographical differences (district of residence, etc.) in the perception of health, morbidity and mortality.

(See projects and publications: pages 44-46.)

4 Health Policy and Services Area

Lines of research

This area of research, developed more recently, is based on the collaboration with different health care areas in the city, especially as regards **hospital services, primary healthcare and treatment for drug addiction**.

Strategic Objectives

- Determination of the factors that influence the use of hospital services by the population.
- Analysis of the effectiveness of certain preventive measures carried out in the hospital area.
- Evaluation of the primary healthcare reform's impact on health.
- Analysis of the effectiveness of certain preventive measures carried out from primary healthcare.

- Design of intervention strategies in different fields aimed at care for drug addictions: territorialisation, risk reduction policy, protocols for collaboration with institutions and programmes, evaluation of the effectiveness of brief interventions, etc.
- Evaluation of the effectiveness of the healthcare network for treating drug addictions.

(See projects and publications: pages 47-48.)

5 International Health Area

Lines of research

This area includes research oriented towards the study of all diseases that are imported (by immigrants, aid workers, travellers), as well as the health situation of immigrants in the city. It also includes research projects carried out in low income countries.

Strategic Objectives

- Evaluation of priority health needs in certain developing areas and countries, refugee camps, etc.
- Study of the differential characteristics of diseases such as tuberculosis, HIV/AIDS, in foreign immigrants resident in the Barcelona area.
- Description and control of diseases that are imported (by immigrants, aid workers, travellers, etc.).

(See projects and publications: pages 49-50.)

6 Methodology Area

Lines of research

This area includes two clearly differentiated lines: firstly, scientific publishing, and secondly, research regarding methodological aspects of public health practice and its different disciplines.

Scientific Publishing

Strategic Objectives

- Evaluation of scientific publishing in the process of research.
- Study and control of quality of the main bibliometric instruments available for the publication of public health research results.

(See projects and publications: pages 51-52.)



Teaching activity

As commented at the beginning of this document, the ASPB/IMSP organises and participates in a large number of courses and has collaborations with different academic institutions, forming its own broad teaching offer, especially on a postgraduate level, for doctorates and masters degrees.

Apart from the training of scholarship students (see pages 72 and 73), the participation of the ASPB in the recently accredited Teaching Unit for Preventive Medicine and Public Health, for the training of medical residents via the MIR programme, the result of an agreement with the Pompeu Fabra University (UPF), the Municipal Institute for Healthcare (IMAS) and the ASPB/IMSP, has allowed this teaching offer to be extended.

Finally, as a result of an agreement that dates back to the mid 1980s, the ASPB/IMSP maintains close links with the School of Public Health of the Johns Hopkins University in the United States (see the table on page 58), through which numerous courses and consultancies with a broad impact have been offered.

The different courses held during the 1997-2002 period, which are presented in table form (see pages 56-57), have been structured according to the direction and teaching of university education courses, collaborations and agreements for practical work and courses in training programmes.

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