PROJECT PERIODIC REPORT

Grant Agreement number: 226873

Project acronym: MOBI-KIDS

Project title: Risk of brain cancer from exposure to radiofrequency fields in childhood and adolescence

Funding Scheme: Collaborative Project – Small or medium-scale focused research project

Date of latest version of Annex I against which the assessment will be made: 27/07/2009

Periodic report: **1st** ☐ **2nd** ☑ **3rd** ☐ **4th** ☐

Period covered: from 01/03/2010 to 31/08/2011

Name, title and organisation of the scientific representative of the project's Coordinator:

, *Fundació CREAL- Centre de Recerca en Epidemiologia Ambiental*

Tel:

Fax:

E-mail:

Project website address: www.mbkds.net

Declaration by the scientific representative of the project Coordinator

I, as scientific representative of the Coordinator of this project and in line with the obligations as stated in Article II.2.3 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate) [1]:

  ☐ has fully achieved its objectives and technical goals for the period;

  ☑ has achieved most of its objectives and technical goals for the period with relatively minor deviations.

  ☐ has failed to achieve critical objectives and/or is not at all on schedule.

- The public website, if applicable

  ☑ is up to date

  ☐ is not up to date

- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (section 3.4) and if applicable with the certificate on financial statement.
- All beneficiaries, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under section 3.2.3 (Project Management) in accordance with Article II.3.f of the Grant Agreement.

Name of scientific representative of the Coordinator:

Date: 05/12/2011.

For most of the projects, the signature of this declaration could be done directly via the IT reporting tool through an adapted IT mechanism.

[1] If either of these boxes below is ticked, the report should reflect these and any remedial actions taken.

Table of contents

1 Publishable summary

mobi-kids
Study on Communication Technology, Environment and Brain Tumours in Young People

1- Please provide a summary description of project context and objectives.

The current project aims to assess the potential carcinogenic effects of childhood and adolescent exposure to radiofrequency (RF) and extremely low frequency (ELF) from mobile telephones on tumours of the central nervous system.

Because brain tumours in children, adolescents, and young people are rare, and because the effect of EMF exposures from mobile phones, if any, is expected to be small, studies in single countries will generally lack sufficient statistical power to evaluate the possible relation between these exposures and the risk of brain tumours. Only careful large-scale collaborative studies, with detailed exposure assessment and major efforts to avoid and characterise possible biases will therefore be able to address this aim. The MOBI-KIDS study will include over 2,000 cases of malignant and benign brain tumours aged 10 to 24 years and their respective controls from 15 countries: Australia, Austria, Canada, France, Germany, Greece, India, Israel, Italy, Japan, Korea, the Netherlands, New Zealand, Spain, and Taiwan, which are included in the current contract, and India, Japan, Korea, and Taiwan (countries which have newly joined the project and not included in the current contract).

To achieve the overall aim of the project, MOBI-KIDS has the following operational objectives:

- To conduct a multinational epidemiological case-control study of brain tumours diagnosed in young people in relation to EMF exposure from mobile telephones and other sources of RF in eight countries under the current grant, and subject to funds being secured separately, in a number of non-European countries;
- To develop and validate improved indices of RF and extremely low frequency (ELF) exposure, and assess related uncertainties, for all of the subjects in the study; and
- To analyse the relation between risk of brain tumours and exposures to RF and ELF from mobile phones and other relevant and important sources of exposure in the general environment of young people.

The project builds upon the methodological experience (both in terms of exposure assessment and epidemiological design) collected within the INTERPHONE study[2]. Particular attention is being paid to issues of: potential selection bias related to the very low response rates of population-based controls – by selecting hospitalized controls with a

[2] The Interphone Study Group. Brain tumour risk in relation to mobile telephone use: results of the INTERPHONE international case-control study. Int J Epidemiol 2010; 39(3):675-694.

specific diagnosis, representative of the general population and unrelated to mobile phone use –; and potential recall errors – by validating questionnaire responses with the help of network operators and repeat questionnaires. Improved exposure indices for RF are being derived taking into account spatial distribution of energy in the brain at different ages. ELF from the phones will also be considered, as well as other important sources of EMF in the general environment of young people.

2- Please provide a description of the work performed since the beginning of the project and the main results achieved so far.

Work since the beginning of the project included the development, pilot testing, optimisation and finalisation of study documents, establishing the infrastructure for data collection and validation, obtaining ethics approvals from several hundred hospitals and institutional review boards in the participating countries, development of dissemination tools and start of data collection in the majority of the countries. It is noted that a number additional countries, not included in the current grant, have recently joined the Mobi-Kids study (India, Japan, Korea, Taiwan) thus increasing substantially the power and representativeness of the study.

Extensive work has gone into characterising and modelling ELF and RF exposure from different types of mobile and cordless phones, from different communication systems and from other environmental sources of EMF. A protocol for exposure assessment for potential occupation and environmental risk factors is under development.

Substantial work has also gone into the development of the study databases and computer assisted personal interview including data validation.

3- Please provide a description of the expected final results and their potential impacts and use (including socio-economic impact and the wider societal implications of the project so far).

The main outcome of the MOBI-Kids project is to assess whether exposure to EMF from mobile communications technologies in childhood and adolescence can increase the risk of brain tumours. Because such tumours in young people are rare, and because the effect of EMF exposures from mobile phones, if any, is expected to be small, inclusion of a large number of countries is essential in order to achieve sufficient power to detect an association between EMF exposure and risk of brain tumours if it exists. In addition to the project partners a number of additional countries have joined the project resulting in an important increase in statistical power. Results of this project are therefore expected to be of great importance in the assessment of potential health risks from mobile telephone use as well as from EMF in general, as well as to increase our understanding about the aetiology of brain tumours in young people.

2 Core of the report for the period: Project objectives, work progress and achievements, project management

2.1 Project objectives for the period

Although there was no breakdown of project objectives per reporting period in the MOBI-KIDS Description of Work, the following were objectives for months 13 through 30, per work package:

WP1: Scientific coordination and conduct of the epidemiological study

To coordinate the overall project as well as to begin data collection, including questionnaires and, where appropriate, biological samples from cases and controls.

WP2: Finalisation of the study instruments

To finalise the study questionnaires and the common core protocol to be used in all countries.

WP3: Quality assurance

To finalise and implement quality control procedures for the conduct of the study.

To finalise protocols for validation studies.

WP4: Exposure assessment

To develop and test an approach for RF measurements, modelling, and exposure gradient.

To develop and test an approach for ELF measurements, modelling, and exposure gradient.

To develop and finalise Gridmaster head models and exposure databases.

To develop a strategy for assessment of exposures other than ELF/RF.

WP5: Data analysis and management

To finalise the development of the study database, including validation tools for real-time checking of data during the interview.

WP6: Dissemination

To undertake dissemination activities according to the communication plan.

WP7: Project management

To support the Scientific Coordination in the follow-up of the workplan and in Consortium management issues, especially through amendments to the contract as necessary, financial management, and organisation of meetings of the Consortium, Subcommittees, and Task Group.

2.2 Work progress and achievements during the period

WP1 – Scientific coordination and conduct of the epidemiological study

WP leader: [redacted] – CREAL

Participant number	**1**	3	6	7	8	9	10	11	12	13
Participant short name (WP leader in bold)	**CREAL**	UU	LMU	MUV	UNITO	ARECEA	UOA-SARG	GERTNER INSTITUE	UOTAWA	MONASH
Person-months per participant	**60.32**	10.70	13.80	15.00	20.33	12.80	10.24	11.40	8.40	12.00

During the reporting period, this work package focused on two important and complementary aspects: the overall scientific coordination of the project as well as the set-up and implementation of the study in all countries.

Overall scientific coordination of the project

Work on this aspect was primarily accomplished through study meetings. There were two full consortium meetings in April 2010 and March 2011, respectively. These meetings allowed for a thorough discussion of the study protocol. Strategies to deal with issues arising from the field were developed during the course of the full consortium meetings. In addition, a fieldwork coordinator meeting was conducted in March 2011, providing a forum for discussion of nuances of the protocol and questionnaire, as well as other issues arising during fieldwork. Finally, interviewer trainer training workshops were conducted in April 2010 and March 2011 to prepare the coordinators to hold interviewer training workshops in their own language at the national level, to deliver questionnaires, and to familiarise them with the content of questionnaires and approaches to contact study subjects.

Meetings of the exposure assessment subcommittee were held in April 2010, November 2010 and March 2011. In addition, a small subgroup met for specific EMF discussions in March 2011 and HPA and FT have held regular conference calls about the ELF and RF exposure assessment throughout the reporting period.

In addition, [redacted] maintained contact via Skype, e-mail, phone calls and discussions on the occasion of other meetings and conferences with all partners to monitor and discuss progress and difficulties. One of the main difficulties has been finding eligible controls within a reasonable time period, particularly at the start of the field work when not all control hospitals had yet been contacted. All issues identified were discussed with the epidemiology subcommittee and WP2 partners, as appropriate.

Conduct of the study in all countries

Progress of the work is described by country below.

Australia (MONASH)

The Australian investigators are [redacted] (Monash University), [redacted] (University of Sydney), [redacted] (University of Western Australia), [redacted] (Monash University), and [redacted] (Monash University).

Funding of $693,550 was awarded by the Australian National Health & Medical Research Council (NHMRC) under the NHMRC-EU grant program to support Australian involvement in the study, including data collection from Australian cases and controls.

[redacted], was appointed in August 2010.

Ethics committee approval has been obtained in Melbourne from Monash University and Alfred Health (The Alfred Hospital and Sandringham Hospital). An ethics submission is awaiting approval at The Royal Children's Hospital and it is anticipated that implementation of the study at The Alfred Hospital will begin in November 2011.

Ethics approval has been acquired from a lead Human Research Ethics Committee (HREC) based at the Royal Prince Alfred Hospital for all of the targeted hospitals for cases in the Sydney metropolitan area. Currently, applications are in progress for Specific Site Assessment (SSA) approvals from each individual hospital (necessary to begin implementation at that hospital). For the control recruitment in Sydney, an application was submitted to the NSW Population and Health Services Research Ethics Committee to be able to centrally recruit matching controls through the NSW Department of Health's databases.

In Perth, preliminary discussions are taking place with key personnel at the targeted hospitals in preparation for Ethics Committee applications.

Austria (MUV)

The Austrian investigators are [redacted] and [redacted].

Activities during the reporting period were as follows:

All eleven hospitals with neurosurgery departments in Austria have been selected for participation in the study. Seven of these hospitals also treat children (<15 years old). Cases between 15 and 24 years old will be included from all eleven neurosurgery department.

Nine of the hospitals performing neurosurgeries also have general surgery or paediatric surgery departments that will provide controls. To cover the whole catchment area of each neurosurgery hospital, nine additional hospitals have been selected for control ascertainment. Hospitals for control identification were selected based on the geographic area and number of appendectomies conducted in 2009.

Interviewer training has been performed. Data collection started in May 2011 but was stopped in July due to changing ethics requirements, with approvals now needed for each hospital (instead of a general national approval). Additional ethics approvals have been submitted and are under review.

The project has been presented at the Environmental Medicine Course of the Austrian Chamber of Physicians and at the 4th International Conference on Risk Analysis.

Canada (UOTTAWA)

The Canadian investigators are University of Ottawa), (Ottawa Hospital Research Institute), (British Columbia Cancer Agency), (Cancer Care Ontario), and .

The Canadian research team received approval for funding in April 2011 with a grant from the Canadian Institutes of Health Research (CIHR) in partnership with the Canadian Wireless Telecommunications Association (CWTA).

In Canada, three centres (University of Ottawa, Cancer Care Ontario in Toronto, and British Columbia Cancer Agency in Vancouver) have agreed to participate in the study. A project team workshop was held in Ottawa in June 2011. The investigators and project coordinators attended the meeting and discussed the application of the study protocol for Canada.

Each centre has met with physicians at hospitals to discuss their participation and to finalise the recruitment procedures respecting the guidelines set by each local ethics committee. Local procedure and recruitment study protocols have been finalised in each centre. Ethics applications have been submitted for the main children's and adult's hospitals. Responses to the ethics committees' feedback are being prepared. Also, the children's hospital in Toronto has received scientific review. Ethics approvals are expected from most of the hospitals within the next month.

The project team has been scheduling monthly conference call to discuss the study. An interviewer training will be held in the next few months as well as a full study team meeting in early 2012. The Canadian team also has an agreement with the three main network operators to access billing records from subjects who will give consent to participate in the retrospective validation study.

France (ARECEA)

The French investigators are and .

This reporting period has been mostly dedicated to the recruitment of participating hospitals in the regions where implementation was planned: cancer centres and hospital surgical units involved in brain tumor treatment as well as surgery units for patients with appendicitis. The coordination team has been often asked to make scientific presentations to medical staffs across the country prior to being granted ethics approval. Despite these efforts, it was impossible to conduct this study in two of the regions (the northern and southwestern regions) we originally approached as the main neurosurgery units refused to participate. As a result, two new districts have been included in the south and southeast of

France. The surgery units caring for appendicitis have been approached according to their distribution between the public and private sectors in each study region: the proportion of controls included in private units should be half in the Parisian region; two-thirds in the south; and one-third in the east of France. Repeated contact with private hospitals and clinics often led to a refusal to participate in the study. The reasoning offered by private hospitals and clinics is that patients choose the private sector to avoid being disturbed in any way. More time and efforts will still be necessary for this portion of the protocol.

The final approval by the French National Ethics committee was received on December 2010. In addition, a lot of hospital units asked for a signed agreement with ARECEA to allow the recruitment of cases with brain tumor or controls with appendicitis within the institution.

Six interviewers have been hired from March to May 2011 to ensure the study implementation in the participating regions. Each is responsible for data collection regarding participants with brain tumors and participants with appendicitis in a study region. Local organisation is settled with the help of hosting research or hospital units already linked to ARECEA on other epidemiological projects. Interviewer training and coordination are performed nationally by the coordination team based in Nancy. The first national meeting for interviewers was held in Paris at the National Institute for Health and Medical Research (INSERM) on June 7th. The next one has been planned for September 7th after three months of implementing the protocol.

Data collection has begun with paper versions of the questionnaires (index, parental and clinical). To ensure the reliability of the French version of the questionnaires, a back translation was performed in July 2010 as requested by the study protocol.

Given the fact that brain tumours are very rare and that doctors do not allow study personnel to approach their patients too soon after the diagnosis, only two participants have been interviewed at the end of the reporting period. However, twelve participants have been identified as eligible with the reference date of March 1st 2011.

The coordination team has almost achieved a collaboration agreement with the three main network operators in the country to participate in the validation study of mobile phone use. The operators have agreed to provide data such as number, length, or type of call for the previous twelve months provided that participants and subscribers sign a consent form. At this time, one operator has signed the agreement, formalized the technical aspects of data exchange, and is ready to receive data requests.

Germany (LMU)

The German investigators are [redacted] and [redacted].

Data collection officially started in October 2010. Although the first cases could be recruited at the end of 2010, most cooperating hospitals did not begin case recruitment until 2011 due to pending approvals by local ethics committees. Up to now, 32 hospitals (mainly neurosurgery but also oncology departments) covering the major urban and metropolitan areas of Germany have agreed to participate. Some more hospitals will possibly join during the course of the study. Thus far, 23 brain tumour cases have been

identified of which 13 have been interviewed. With the majority of cases being recruited during the second half of 2011, it seems that case recruitment increased markedly recently.

Regarding control recruitment, 41 hospitals have agreed to participate. Corresponding doctors have identified 20 potential controls of which five have been interviewed. Controls are very difficult to trace because appendicitis is often treated in ambulatory care. However, as with case recruitment, ascertainment of controls has improved over the last few months with more cooperating hospitals joining and getting ethics approvals.

Even though it took longer then originally planned to get the study running, a further increase of recruited cases and controls can be expected in the near future.

Greece (UOA-SAGR)

The Greek investigators are [redacted] and [redacted].

Overall, the project team has devoted efforts to:

1) Maintain and expand the ad hoc network of local partners contributing data;
2) Identify gaps in the daily routine of the project implementation and ensure maximum adherence with the study protocol taking into account the conditions in Greece;
3) Hire and train a new interviewer/field coordinator in response to turnover of personnel; and
4) Suggest modifications and correspond with [redacted] and leadership of the project.

Specifically, while waiting for the final version of the Informed Consent Form, the application procedure was initiated with the local Ethics Committees following the translation of preliminary questionnaires. The study has been approved by the Bioethics Committee of the University of Athens and by seven hospitals which will contribute cases and/or controls. Approval is pending from another nine hospitals.

Identification of as many cases as possible in the specific age group is a challenge. A great effort has been dedicated to expand the network of neurosurgeons, particularly in this time of financial crisis which endangers the influx from the two private hospitals. Regular personal contact with each neurosurgery department (both in the public and in the private hospitals) as well as with individual neurosurgeons has been selected as the most appropriate process in the absence of a formal network or cancer registry. Up to date, we have initiated collaboration with the directors of 22 neurosurgery departments. However, it seems that the majority of individuals (especially among children age 10 to 14 years) have been contributed by oncology departments, with which we also maintain contact. Currently, contact has been established with all six pediatric hematology-oncology departments. In addition, collaboration has been sought with five university clinical oncology departments in Thessaloniki, Ioannina, Larissa, Patras, and Crete. Finally, contact with the pathology departments of the collaborating hospitals has been planned to minimize the number of missed cases. In total, 29 departments in 25 hospitals all over the country (in Athens and in the five main geographical peripheries) have been contacted and informed about the project.

An even bigger challenge of data collection is the identification of two hospital-based controls (per case) with the specific diagnosis of appendicitis given the short duration of their hospitalization and the limited recruitment time relative to the identification of the respective case. For the identification of controls, contact has been established with the surgery departments of two children's hospitals, four general public and two private hospitals in Athens, and one university hospital in Crete to set up the appropriate recruitment mechanism.

At present, a total of 17 cases and 31 controls have completed interviews.

Neuroradiologists who will perform the initial tumour localization have been identified and contacted. However, there is a delay, primarily on the part of the paediatric oncology departments to deliver imaging CDs, as no computerised Picture Archiving and communication system (PACS) in place in Greece.

Lastly, an effort has been made to update/complete the clinical questionnaire for previously interviewed cases.

Israel (GERTNER INSTITUTE)

The Israeli investigators are [redacted] and [redacted].

In Israel, there are six neurosurgery departments, all of which (with the exception of one that is not participating in the study) gave their consent for participation in the study. IRB approvals for selecting cases and controls were obtained from these five institutions. In order to have sufficient geographical coverage for control selection, an additional six hospitals were contacted. Ethics approvals from these hospitals were obtained from January 2010 to August 2011.

A local protocol for data collection in line with the international study protocol was prepared. Modifications were made to adjust the protocol to the local situation and requirements.

The final protocol for enrolment of incident cases in the study includes the following:

a. A list of suspected brain tumour cases is collected weekly from the medical staff of the five participating neurosurgical centres (both in adult and children's departments).

b. A periodic review of the hospitals' computerized files, as well as the pathology departments' files, is conducted to verify that all eligible cases were identified.

c. A representative of the medical staff contacts the case regarding participation in the study and obtains the case's general agreement to participate.

d. The medical staff evaluates the patient's condition before the study nurse approaches the case.

e. The study nurse approaches the patient to explain the study goals and to obtain consent for participation in the study as well as to schedule an interview.

f. A face-to-face meeting is conducted: the interviewer obtains a signed informed consent and an in-person interview.

The final protocol for controls enrolled in the study includes the following:

a. The appropriate hospital for control recruitment is chosen according to the geographical area of residency of the case.

b. A matched control is identified from the hospitals' computerized files according to gender, age, and date of operation.

c. The study nurse approaches the patient to explain the study goals, to obtain consent for participation in the study, and to schedule an interview for a later date.

d. A face-to-face meeting is conducted: the interviewer obtains a signed informed consent and an in-person interview.

Recruitment of brain tumour patients and matched controls was initiated in August 2010. Thus far, 29 brain tumour cases from five medical centres have been identified. Among these, 26 are eligible for participation in the study (two patients were excluded because of morphology subtypes which were not included; one patient was excluded because the date of diagnosis preceded the beginning of the study). Out of the 26 eligible cases, three refused to participate and 23 cases have provided consent for participation. Twenty cases have already been interviewed.

Sixty-five eligible controls from nine medical centres were identified for these 26 eligible cases. Twenty-two have been interviewed, 20 have agreed to participate and are pending interviews, and 23 refused to participate.

The non-response questionnaire (NRQ) was translated into Hebrew. Since this task was not included in the initial protocol approved by the IRB, an updated version of the protocol including the NRQ was recently submitted to the ethics committees for re-approval. Following the IRB approval for this part, NRQs are being used for all identified cases and controls who refuse to participate in the study. Those who refused participation prior to IRB approval will be contacted by phone to complete an NRQ.

All questionnaires are checked for completion, and open fields are coded. Logical tests and descriptive statistics on the completion of the questionnaire (and variables) have not yet been performed. This will be done using the software of the computerized questionnaires which will be available shortly. However, according to the reports and comments of the interviewers, it seems that the questions are clear, and no significant problems have appeared.

The participants are interviewed by four interviewers trained in the administration of the questionnaires. Local workshops are conducted once a month to ensure consistent reliability of data collection.

All of the Israeli mobile phone providers have been contacted to learn about the available data. The contracts are being finalized; validation data should be collected from operators within several weeks.

MRI and CT reports are being collected; the images will be reviewed in parallel to the interviews when the program for localization data is ready.

Italy (UNITO)

The Italian investigators are , and .

During the second reporting period of the project, physicians were sought out to participate for the identification of cases and controls in the four participating Italian regions. These physicians were from relevant hospital departments, including: paediatric oncology centres; neurology and neurosurgery units; general surgery units; and paediatric surgery units.

Applications to local ethics committees were finalized. Some ethics approvals are still pending. Work is ongoing to answer requests.

The questionnaires were translated in Italian and back-translated in English. In addition, the electronic version of the questionnaires was tested. Suggestions for improvement were made to CREAL.

The recruitment of cases and controls has started in each Italian centre between February (Lombardy) and September 2011 (Piedmont, Emilia Romagna, and Tuscany).

The main network phone operators in Italy (VODAFONE, TIM, H3G and WIND) have been contacted. An informed consent form for obtaining provider data for the validation study on mobile phone use was defined and agreed upon. One of the operators (Vodafone) has agreed to provide data for the previous 24 months of telephone traffic and an agreement has been signed. Contacts with the other operators are ongoing to obtain the same type of agreement.

The Italian team will contribute to the collection of biological samples (Oragene saliva) for genetic analyses.

The Netherlands (UU)

The Dutch investigators are and .

serve . also .

During the reporting period, the Dutch Society for Paediatric Oncology (SKION) gave their full support to the study and enabled the recruitment of Dutch paediatric oncologists for participation. In order to capture cases older than 18 years old, direct contacts have successfully been made with neuro-oncologists in the neuro-oncology centres in the Netherlands.

Medical ethical clearance was acquired from Utrecht Medical Centre in March 2011. An additional four case hospitals as well as three control hospitals have provided local clearance. Medical ethical clearance is pending at 11 hospitals.

Thus far, two interviews have been conducted (one glioma case and one matched control). Out of four eligible (glioma) cases identified, three have agreed to participate (75%

response). Response rate for controls is 100% (one invited and agreed to participate). Enrolment at other hospitals is expected to increase soon with additional ethics approvals.

A subsidy was obtained to collect DNA material from saliva of cases and controls.

New Zealand (AUCKLANDUNI)

The New Zealand investigators are [redacted] and [redacted].

Funding for the New Zealand portion of MOBI-KIDS has been sought from the New Zealand Health Research Council and the Child Cancer Foundation (both pending). As funding has not yet been awarded, recruitment of study participants has not yet begun.

Spain (CREAL)

The Spanish investigators are [redacted] and [redacted].

As soon as the protocol of the study was finalised (WP2), CREAL submitted an application for ethics approval to its institutional review board at IMIM (Instituto Municipal de Investigación Médica). Once this was obtained (June 2010), applications were made to the relevant hospital ethics committees in the participating autonomous communities.

During the reporting period, 73 hospitals were contacted for case and/or control ascertainment. Ethics approvals were obtained from 58; 12 are pending and 3 have refused. Contact is being made with several additional hospitals for control selection.

The first interviews were conducted in February 2011 in Cataluña and Madrid. Up to now, 32 cases and 34 controls have completed interviews.

The Spanish team will contribute to the collection of biological samples (Oragene saliva) for genetic analyses based on complementary national funding.

External countries (India, Japan, Korea, and Taiwan)

Three new countries (India, Japan, and Korea) were recruited during this reporting period. As they are recently funded, work has focused on translating and back-translating the questionnaires into the respective languages (Hindi, Japanese, and Korean). Ethics applications have been submitted, with more to follow in the next reporting period. Japan and Taiwan have begun data collection in July and September 2011, respectively; the others expect to begin in the next few months once ethics approvals have been granted.

The Indian team will contribute to the collection of biological samples (Oragene saliva) for genetic analyses based on complementary national funding.

Deviations in schedule and use of resources

The original project schedule (see Gantt Chart in DOW) foresaw a large proportion of data collection occurring during the second reporting period, with case identification and control

selection beginning in month 13. The table below shows the expected number of cases per year and for the study period by country versus the actual number of cases collected by country (among the countries that have started collecting data). An additional 280 cases per year (650 for the study period) are expected from countries that have not yet begun data collection.

Country	Expected # of cases		Actual # of cases				Start of data collection
	Per year	Study period	Identified	Interviewed	Refused	Pending	
Austria	35	86	7	2	0	0	May 2011 (stopped in July 2011)
France	94	235	17	6	1	4	July 2011
Germany	125	313	26	12	2	6	Dec. 2010
Greece	25	63	11	11	0	0	Dec. 2010
Israel	40	120	26	21	3	0	Dec. 2010
Italy	68	169	9	9	0	0	Feb. 2011
Japan	50	75	5	4	0	1	July 2011
Netherlands	63	158	4	3	0	0	Aug. 2011
Spain	125	313	41	39	1	5	Feb. 2011
Taiwan	35	100	4	4	0	0	Sept 2011
Total	**660**	**1632**	**150**	**111**	**7**	**16**	

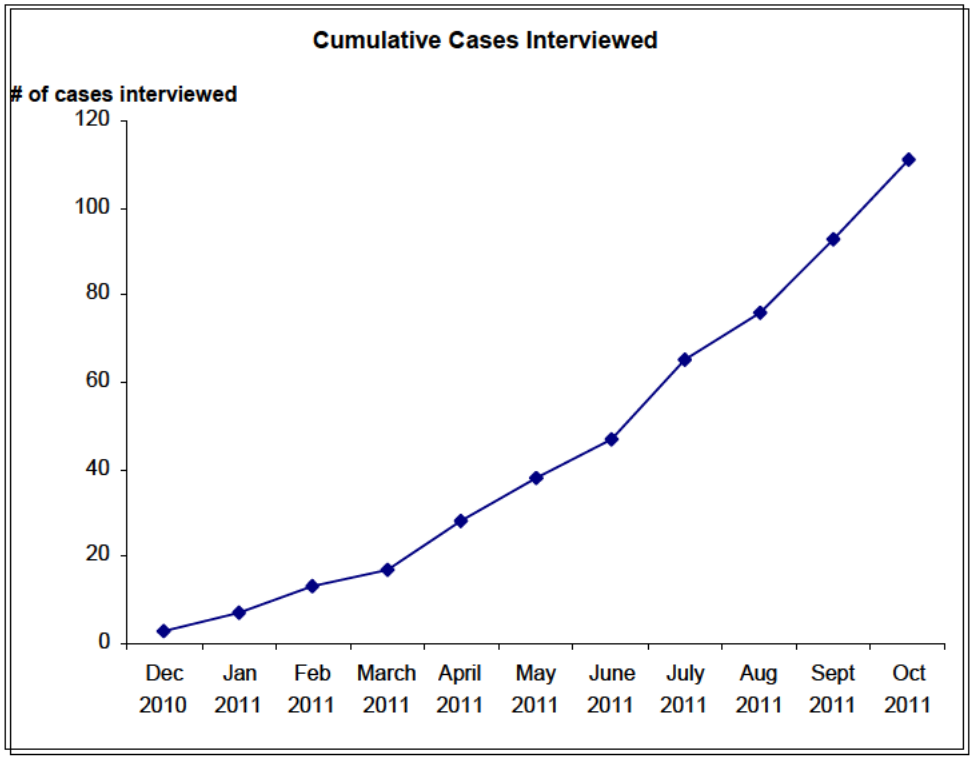

Figure 1: Cumulative total of cases interviewed for MOBI-KIDS

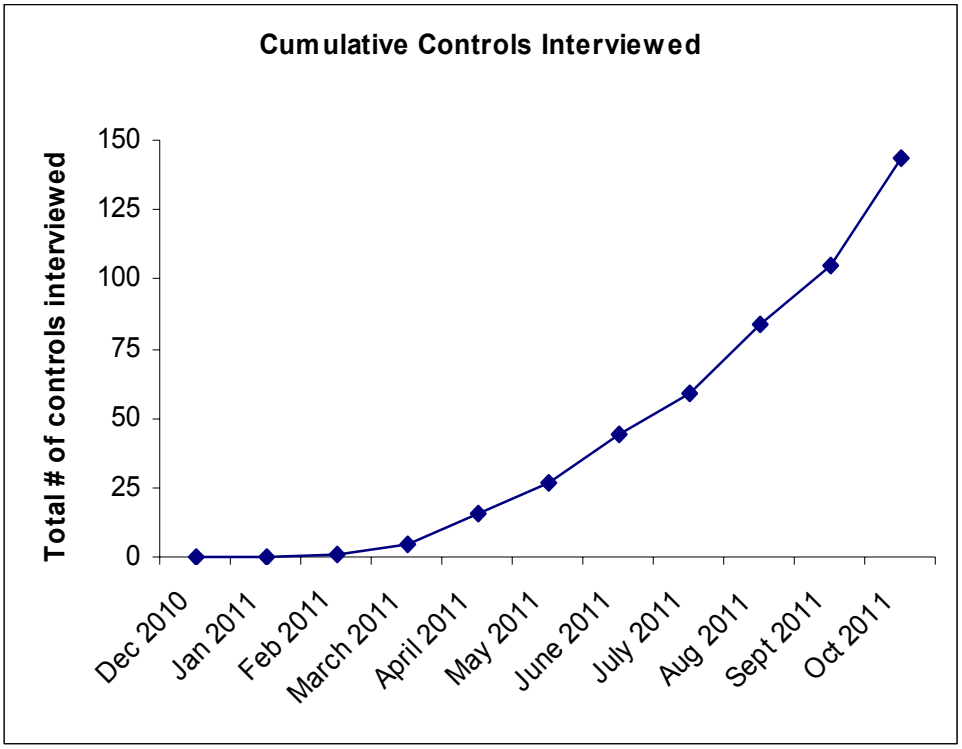

Figure 2: Cumulative total of controls interviewed for MOBI-KIDS

Rates of interviews are expected to further increase when all of the centres are fully up and running. Several countries that have begun data collection are still waiting for ethics approvals in certain hospitals – once all the hospitals have agreed to participate, more cases and controls can be recruited for the study. There are also five countries that have not yet begun data collection (expected to begin in month 34). Once all of the countries are collecting data, we will be able to achieve the necessary number of cases and controls, especially given the addition of three new countries.

Use of resources in WP1 is in line with the work conducted to date. Those countries just starting or about to start data collection reported the least effort and expenditure, as would be expected.

WP2 – Finalization of the study instruments

WP leader: [redacted] - GERTNER INSTITUTE

Participant number	1	4	8	9	**11**	13
Participant short name (WP leader in bold)	CREAL	FT	UNITO	ARECEA	**GERTNER INSTITUE**	MONASH
Person-months per participant	3.75	0.63	1.45	0.50	**4.00**	3.00

The aim of WP2 is to finalize the study instruments, including preparation of the study questionnaires, preparation of show cards and documents for the conduction of the study in the participating countries, as well as preparation of the core protocol and validation of the finalized version.

Following is a description of the achievements of this work plan during the 2nd study period by tasks:

Finalisation of draft questionnaire

The process of assembling and finalizing the questionnaires was much longer than initially anticipated and included several major steps (parts of them were discussed in the year 1 report):

- After the first few versions were presented and reviewed in the collaborators' meetings, the questionnaires were sent to the group for comments. The major issues for discussion included:
    - The choice of topics to be included in the questionnaire, focusing on a balance between obtaining comprehensive data and limiting the duration of the interview to an hour and a half.
    - Adjustment of the questions for 3 different age groups (children, adolescents and young adults).
    - Division of the questions into parental and index questionnaires.
    - Achieving maximal clarity of questions.
    - Covering all sources of exposure to non-ionizing radiation.
- Additional corrections were made following conference calls performed by representatives from each center.
- The final version was thoroughly discussed during the group meeting in March 2011 in Sitges where a small number of remaining inconsistencies were found.
- Following this meeting an updated and final version was sent to the group.

The study questionnaires include 3 parts:

a. Details for communication and data on the interviewee (for the main questionnaire and for the parental questionnaire)

b. Main questionnaire (index data)

c. Parental questionnaire (maternal & paternal data)

In addition, we have developed 2 other questionnaires: a clinical questionnaire which is used to record data regarding the disease, and a non-respondent questionnaire (as mentioned before) which is used in the event that the case /control refuses participation.

Supplementary Material for Questionnaire

- Several supplements were developed to improve the understanding of the questionnaire and recall of the interviewees. These appear in the list of annexes which includes the following: List of eligible brain tumour topologies and morphologies, Country specific protocols for informed consent, Documentation of participation and refusal status, Refusal questionnaire, Guidelines for interviewing, Questionnaire details for communication, Site specific questions, Questionnaire's code book, Glossary, Database of mobile phones, Clinical questionnaire, Protocol for tumor localization, Protocol for slide collection and revision, Protocol for validation of mobile phone use, Protocol for validation of the questionnaire data, Protocol for DNA collection.

These annexes were updated and finalized during the last year.

Translation of the questionnaire

- The original English questionnaire was translated into all the study languages and back translated to English for verification.

Preparation of procedures

Core protocol

The study protocol was finalized and specific data from all participating centers was added.

The 4th version was prepared and discussed thoroughly in the meeting which took place in Sitges in March 2011. The protocol was improved in accordance with decisions made at that meeting. The final version has been distributed and provided as a project deliverable to the EU. The protocol is expected to be a living document; corrections and updates were and will be made in the future in accordance with specific issues and questions which arise from the field. Updates will be sent periodically.

Preparation of code books for analysis

This part has been completed by CREAL as part of the computerized questionnaire.

WP3 – Quality Assurance

WP leader: [redacted] - UU

Participant number	1	**3**	8
Participant short name (WP leader in bold)	CREAL	**UU**	UNITO
Person-months per participant	0.50	**5.10**	1.70

During the reporting period, protocols for validation of study data were further developed and discussed at two meetings.

Both UU and CREAL and France Telelcom managed to get additional funding for acquiring software-modified smartphones from respectively The Dutch ZONMW Research Programme EMF and Health and from the most recent French ANSES call (MobiExpo study). A protocol based on previous experiences from the INTERPHONE study has been finalized and a small pilot study is about to start in order to further develop a final protocol for the large-scale validation study on the reliability and validity of self-reported mobile phone use. Use of the software modified smartphones will provide validation data on the study participants concerning phone use (amount, laterality, voice vs data) as well as important statistical information on characteristics of phone use in the population (voice, vs texting, vs internet; phone position; received power; wifi use; communication system and communication protocol)

An international panel of neuropathologist was established. A protocol for tumour diagnosis validation is currently being developed. The expert panel currently consists of:

- [redacted], Neuropatologia c/o Neurochirurgia, Roma – Italy
- [redacted], Division of Neuropathology, Fondazione IRCCS Istituto, Neurologico C.Besta Milano – Italy
- [redacted], Dept. of Pathology, Erasmus MC, Rotterdam – The Netherlands
- [redacted], Institute of Neurology, Medical University of Vienna, Vienna – Austria
- [redacted], Dept. of Neuropathology, University of Bonn, Bonn – Germany

The protocol for validation of tumour localisation is in preparation – an age-specific version of the 3D brain cartography (Gridmaster – see WP4) has been prepared and several aspects need to be tested before the protocol for tumour localisation and the protocol for validation of localisation can be finalised.

Validations of collected data have been programmed into the Electronic Questionnaire Application and will be conducted in real time during the interview. Further validations are

being planned to check the completeness of questionnaire and consistency of information collected.

Deviations in schedule and use of resources

Work in WP3 is generally on schedule, but Deliverables 3.2.(Interim Report on Questionnaire Responses - month 24) and 3.3 (Interim Report on Data Validation Issues - month 30) have not been produced yet given the above mentioned delay of finalizing the questionnaire (WP2) and getting the actual interviewing started in the centres (WP1). Since most centres have recently started data collection, we will collect the necessary information and prepare these deliverables as soon as possible.

The used of resources are in congruence with the amount of work performed so far.

WP4 - Exposure assessment

WP leader: [redacted] - HPA

Participant number	1	3	4	**5**	13
Participant short name (WP leader in bold)	CREAL	UU	FT	**HPA**	MONASH
Person-months per participant	5.71	0.50	3.73	**22.00**	3.00

ELF measurements and modelling

The main aim of this activity in WP4 is to identify generic phone models which can be used to classify all phones reported in the study for the purposes of the ELF exposure assessment, which is based on estimates of induced current density inside the head. The main work undertaken during the reporting period was the finalisation of the measurement set up (robotic scanner set up including programming, probe and measurement set up validation), the collection of GSM phones, and the two dimensional measurements with the robotic scanner. The results of the two dimensional scans were used to group phones and determine which phones were representative of those groups, for modelling of the induced current densities for the Gridmaster cartography.

Phone sample

Eighty phones were gathered from staff in institutions working on the project. Some were broken and some were locked, resulting in 47 different phone models available for measurement. There were also duplicate models amongst the collection, and some of these were used to check the variability in magnetic flux density measurements for similar models. The distribution of the phone models collected with respect to make and year of release is shown in Figure 3 Phones from 1997 until 2008 were collected, although most phones were from the period between 2003 and 2005. As Figure 3 shows, around 47% of the phones were Nokia, while 17% were Sony Ericsson and 17% were Siemens. Most of the Siemens phones were from models released in 2003. In terms of phone shape, 68% of phone models were bar shaped, while 23% were slide phones and 9% were flip phones. In terms of battery type, 74% were Li-ion, 17% Li-Polymer, and 9% Ni-MH.

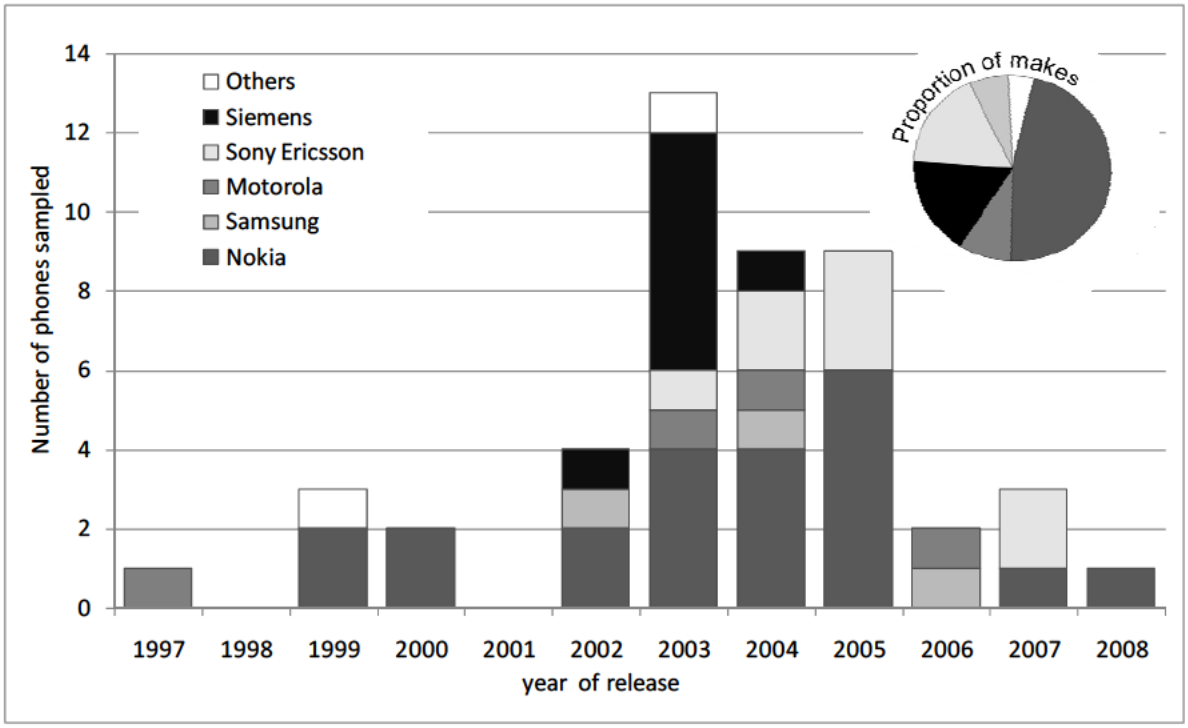

Figure 3: Distribution of phone models gathered as a function of year of release (not year of popularity).

Preliminary measurements

One of the important challenges of this particular work stream is to identify suitable instrumentation to measure the ELF magnetic field accurately and reliably. Firstly, the ELF fields produced by the phones are very weak, secondly they are non-uniform, and thirdly the measurement probes can be affected by the RF signals emitted by the phones during normal transmission.

A planar scanner was used to perform the measurements: firstly for mapping the magnetic field strength in a 2D plane at a fixed distance from the phone and also to make more detailed measurements as a function of distance for representative phones. A Mag 03 Bartington fluxgate magnetometer was used to make the 2D mapping measurements. This instrument has a low noise floor; however the sensor is quite large so it is used as a single axis probe to keep the sensing area as small as possible. The more detailed distance measurements needed to be performed as close as possible to the phone. Therefore a Hall probe was used, which has the advantage of being very small (about 1 cm^3) but also needs to be used with a lock-in amplifier to reduce the noise floor. A base station emulator was purchased to facilitate the assessment of 2G phones at a constant output power level. It was also necessary to undertake an extensive range of validation tests before the measurements could be performed, and these are summarised as follows:

Effect of body presence in ELF magnetic field from mobile phones

The ELF magnetic fields emitted by mobile phones are generated mainly by the current being drawn from the battery, which depends in turn on the power drawn to transmit the RF signal during normal communication. The presence of the head and hand can change the impedance of the mobile phone circuit creating an impedance mismatch. It is possible that the change in impedance may affect the current being drawn from the battery, thereby indirectly altering the ELF magnetic field. The aim of these measurements was to check if

this was indeed the case, and if so, whether it needed to be considered in the measurement. To determine whether the presence of the head would have an effect on the magnetic field from the phone, SATIMO HL1800, a recognised human tissue-equivalent liquid, was placed in a 21 cm x 21 cm x 21 cm container made of Perspex and used as a head phantom. The liquid had the same dielectric properties as a human head at 1800 MHz.

Magnetic flux density measurements were performed for two phones operating at 1800 MHz in the presence of two different phantom shapes (cubic, thin slab), with the communication fixed to maximum power level. No measurements were made at 900 MHz because of potential RF pick up problems. The flux density patterns were quite similar for both phones and for all scenarios, although variations in peak values magnetic flux density were observed. The largest variation in peak value was 36% for the z component and -34% for the resultant, although the decrease in the resultant was not observed in all three cases. These variations seem to be larger than expected when considering the uncertainties in the set up, although the pattern of the magnetic flux density was not greatly affected and the variation was likely to be smaller than that observed between phones. It was therefore concluded that that the impedance mismatch was unlikely to be a major problem for the ELF measurements and a phantom did not need to be included in the measurement set up.

Probe calibrations

The probes used for measurements needed to have a traceable calibration at the frequencies of interest and tests needed to be performed to confirm that the sensors were linear and of sufficient sensitivity to measure magnetic flux densities down to a few tens of nanoteslas. The Mag03 fluxgate magnetometer and the MFS-3A Hall probe were calibrated using a Helmholtz coil. Although the MFS-3A probe was linear and seemed to provide good measurements at 217Hz, the sensitivity of the instrument was not within specifications and some anomalies were found in the presence of static magnetic fields. As a result, a FW Bell sensor and meter were purchased, which had been used successfully in another published study. The Mag03 was linear throughout the range of magnetic flux density levels used in the calibration and its sensitivity was within 1.3% of the value quoted by the manufacturer. Calibrations were made for both shielded and unshielded probes (see next subsection section). Similar tests were performed for the newly acquired FW Bell sensor and meter.

RF rejection tests

Measuring the low magnetic flux densities around mobile phones has the added complication that the measurements are performed near an RF transmitter. It is therefore important to ensure that any RF pick up from the probe is reduced to negligible levels. The Mag03 Bartington fluxgate magnetometer is not a shielded probe and may therefore be susceptible to RF pick up from the mobile phone antenna. RF rejection tests were performed by placing a helix antenna fed with a GSM signal of 36 dBm at a distance of 1.5 cm from the probe. RF pick up was less than 5 nT (<5% of typical signal) at 1800 MHz, but was more considerable at 900 MHz. The probe was therefore shielded for the main two dimensional measurements, however no measurements were made at 900 MHz, as even shielding the probe with conducting copper tape was not enough to reduce the pick up to negligible levels. Similar tests were performed for the newly acquired FW Bell sensor and meter once the equipment was received.

Measurement of magnetic flux density with battery isolated

Preliminary two dimensional magnetic flux density measurements suggested that the magnetic flux density tends to be highest at the position of the battery. To confirm this, a set of further measurements were conducted with the battery isolated from the phone (but still connected to the phone via wires, see Figure 4). Of the three phones assessed, two had normal set-up patterns to that of the battery alone and the amplitudes were larger for the battery than for the phone without the battery. This confirmed that the main source of magnetic fields in the phones is the battery. In the third phone, the field came from the main body of the phone, rather than the battery. These measurements were performed prior to the shielding of the probe. The measurements may be repeated with the shielded FW Bell probe and at closer distances to the phone.

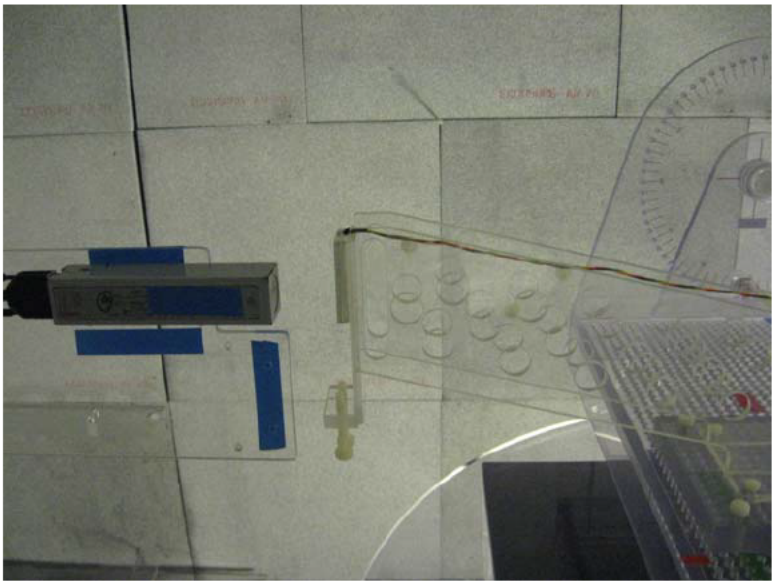

Figure 4 Set up for magnetic flux density measurements of isolated battery.

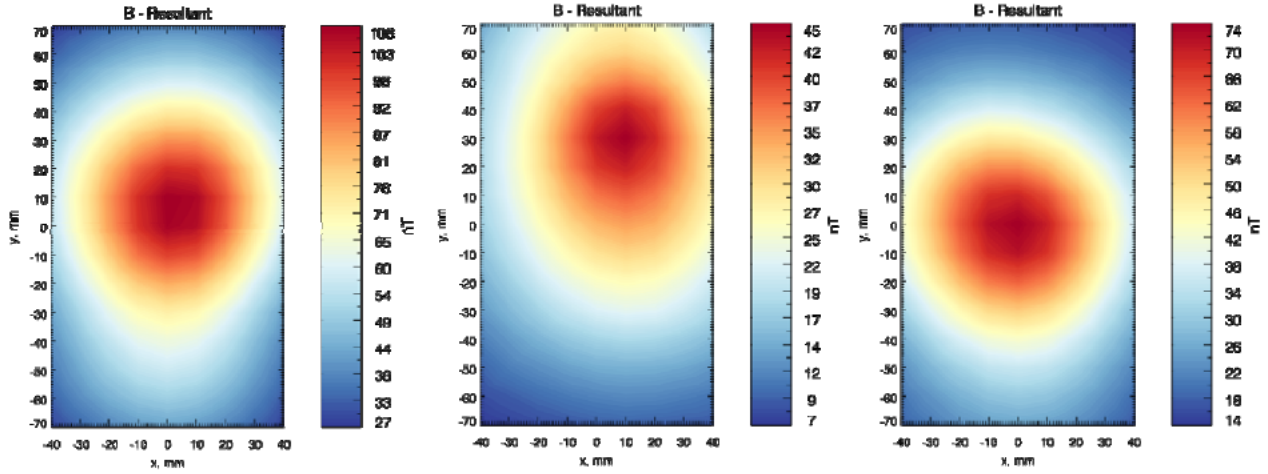

Figure 5: Resultant magnetic flux density patterns for one of the phones with the battery isolated (left), the same phone without the battery (centre) and the phone with the battery intact (right). The measurement on the right was made on a different set up so peak amplitude cannot be compared. Measurement on the left and centre were made using same set up, and distance between battery isolated and probe is the same as if

the battery were inside the phone, showing that the magnetic flux density of the battery is greater than that of the phone circuitry.

Two dimensional magnetic flux density measurements

During this period, the 2D mapping of magnetic flux density for all 47 phone models was completed. No correlations were found between peak resultant magnetic flux density from the patterns and general specifications of mobile phones, such as make, shape, year of release, size of battery or size of phone. As a result, it was concluded that the grouping of the phones would be made in terms of similarities in magnetic flux density pattern. Two methods for comparing patterns were used to determine three representative phone models. Each of these representative models will be used for detailed measurements with the new Hall Effect probe, the results of which would be used for the computational modelling.

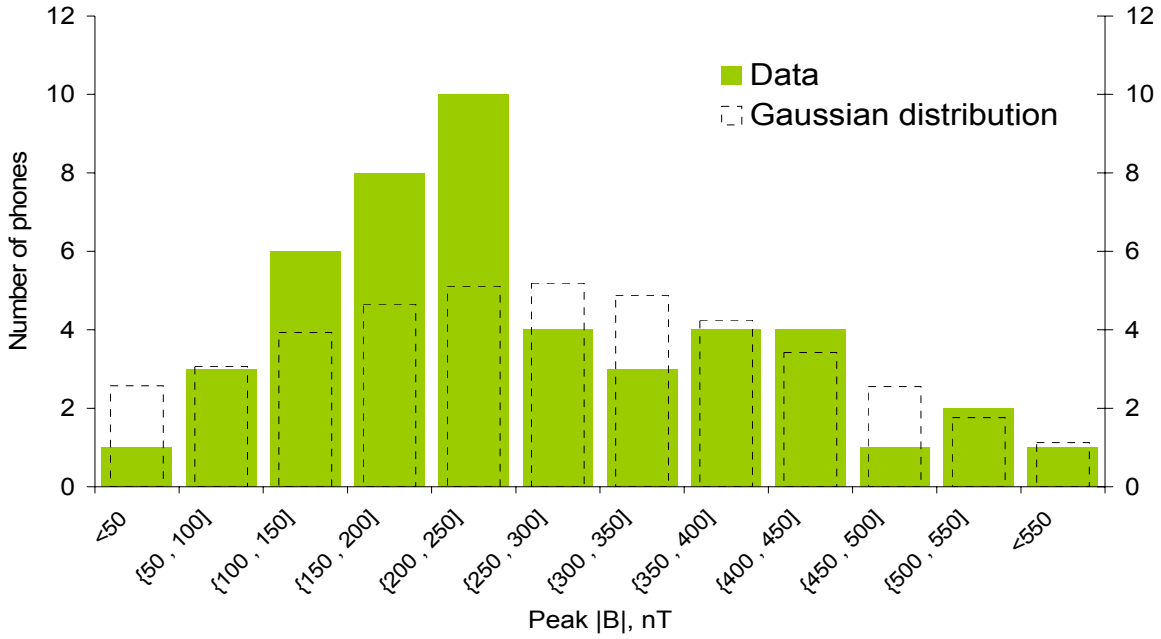

Figure 6: Distribution of peak resultant magnetic flux density of all 47 phone models measured. The dotted line is a Gaussian distribution of same mean and standard deviation.

Computational modelling

Once generic phone models are identified, these will be used to compute the magnetic fields in heads for four different ages. ITIS phantoms will be used for this part of the study and the numerical codes have been adjusted to compute the currents in these models.

Since high resolution measurements are not possible due to the relatively large size of the probes, weakness of signal and measurement duration, an equivalent source model will be used to represent the magnetic field of the phone and determine the field strength at the tumour location. A circular loop will be used, a model which has been used previously in the literature. The aim is to measure the magnetic field distribution and then measure the radial component of the magnetic field strength as a function of distance at the hotspot. The current, radius and position of the loop are then fitted to the measurements as a function of distance.

Additional measurements

The scope of the WP4 has been extended to include a limited ELF assessment of DECT and 3G phones. Preliminary measurements conducted on DECT phones suggest that the ELF magnetic field is likely to be smaller by a factor of 2 in comparison to the field produced by GSM phones. A 3G base station emulator will be required for the assessment of 3G phones. A US research team is assisting in the assessment of the ELF fields produced by CDMA phones, and there is also collaboration with researchers in Japan.

In order to further inform the study questionnaire, a small programme of ELF measurements has also been performed on various electrical appliances, including phone and laptop chargers, clock radios and hair dryers.

RF measurements and modelling: RF Child head RF exposure induced by wireless communication systems

In Interphone measurements have been used to estimate the SAR distribution in the users head. The measurements were analysed and projected in the adult “gridmaster” heterogeneous head model. With Mobikids we are dealing with child heads. The SAM head has been built to be conservative and not representative of the head exposure. Because of that it has been decided to use the numerical dosimetry to estimate the SAR in the child brain tissues. The children brain exposure depends on several parameters such as age, usage, phone model and protocol and can be assess using different approach.

We started to analyse the numerical methods that can be used to analysed the Electromagnetic field emitted by wireless systems and the specific absorption rate (SAR) induced by these systems. We reviewed methods and systems that can be used to assess the SAR in the brain of children. In bioelectromagnetism continuous effort is on going still 20 years to assess numerically the exposure. The Finite Difference in Time Domain (FDTD) introduced by Yee in 1996 is often used to evaluate absorption in heterogeneous tissues. Calculation of E and H are performed using a leap-frog scheme (E and H components are interleaved in both space and time) that lead to a system of equations that are fully explicit.

We also reviewed the influence of the protocol to identify key parameters. The exposure induced by the electromagnetic fields depends on the frequency and the power used by the system. In a cellular network the network controls frequency use and power emitted by a mobile. Depending on the power management and the power control the power distribution changes.

In case of Wifi or of DECT a network supervisor does not control systems. WiFi systems are watching the frequency channel and emit if they do not see any conflict. In case of collision they wait and retry to emit. The access technologies can be divided in few mains categories: the Frequency Division Multiple Access (FDMA), the Time Division Multiple Access (TDMA) and the Code Division Multiple Access (CDMA). FDMA was used by previous generation of cellular phones and old wireless home phones. The TDMA is used by the second generation of cellular phones (GSM 900 and 1800 or 1900 MHz) as well as present wireless phone (DECT). The CDMA is used by Universal Mobile Telephony System (3G). The real power emitted depends on the protocol and on the power. In case of GSM the handover plays an important role for the mean power emitted since the power emitted by a gsm phone is set up at the max in case of handover. This is not the case for

UMTS, as a first consequence the mean power emitted by a GSM is higher than the mean power emitted by UMTS. Previous study did not find strong difference between GSM operating in rural and urban environment. This is due to the handover. With 3G the handover mechanism is different and the difference between urban and rural can exist

To assess the exposure 11 phone models representative of current commercial ones (multi-band having antenna not only on the top of the phone) and sources have been developed in the GSM bands (900MHz and 1800MHz) and in the UMTS band (2100 MHz). The validation of a numerical model is supported in SAR distribution measures. The objective is not to build a numerical model close to an existing model. The objective is to build a numerical model that can be considered as a good representant of existing phone models. A first simplified model was realized. It is based on a commercial slide phone configuration. The slide phone is an interesting configuration because it presents two different antenna positions (in the top and in the center). The modelling takes into account the main elements that can influence the antenna performances (radiation characteristics and impedance matching). In this way, the casing, the frame, the screen, the PCB and the battery have been considered in terms of equivalent electrical characteristics and dimensions. The antenna is implemented on a substrate material with a dielectric constant value (εr =3 and thickness = 2mm) that represents a typical value of commercial materials as Kapton™.

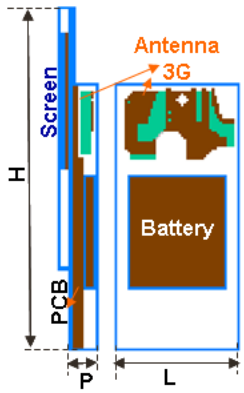

Figure 7: Example of phone model

Since the child head and body models are important to assess numerically the SAR in child brain we reviewed the existing models. The 60‘s have seen large efforts to develop high-resolution anatomical human models. Stylized phantoms were the first since they are easy to scale and to use with Monte Carlo method. Useful for ionising purpose these phantoms are of limited interest for RF exposure since in this case the shape play an important role. Taking advantage of powerful tomographic imaging technologies and the improvement of MRI instrumentation several adult models have been developed. Using these models, the exposure of adults to EMF has been studied showing a large variability. These studies have also shown that investigation of children exposure was required, involving a possible higher exposure for children. Anatomically correct head phantoms and whole body phantoms of children have been developed. In mobikids and after discussion between the partners it has been decided to select 4 child head models.

These head and models will be used to assess the exposure in various configurations. 4 heads, several phones and 3 frequency bands lead to have hundred of simulations. To select the configurations (angles relatively to the head) to cover a design experiment

analysis has been used and few hundred simulations have been performed to select position.

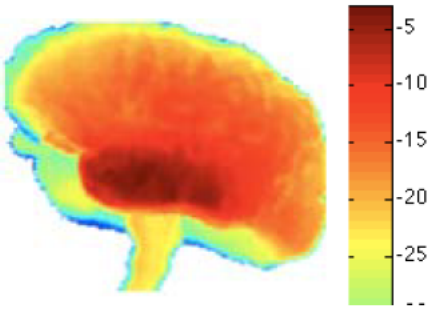

Figure 8: Mean value of 80 simulations performed with different positions.

One of the limitations of previous epidemiological studies has been the possible bias about the laterality and the complexity to assess how people are using their phone. In this study, using the facilities existing in new pda and Android operating system we developed an application able to assess and record the laterality. This software will be used in the study MobiExpo to study the laterality.

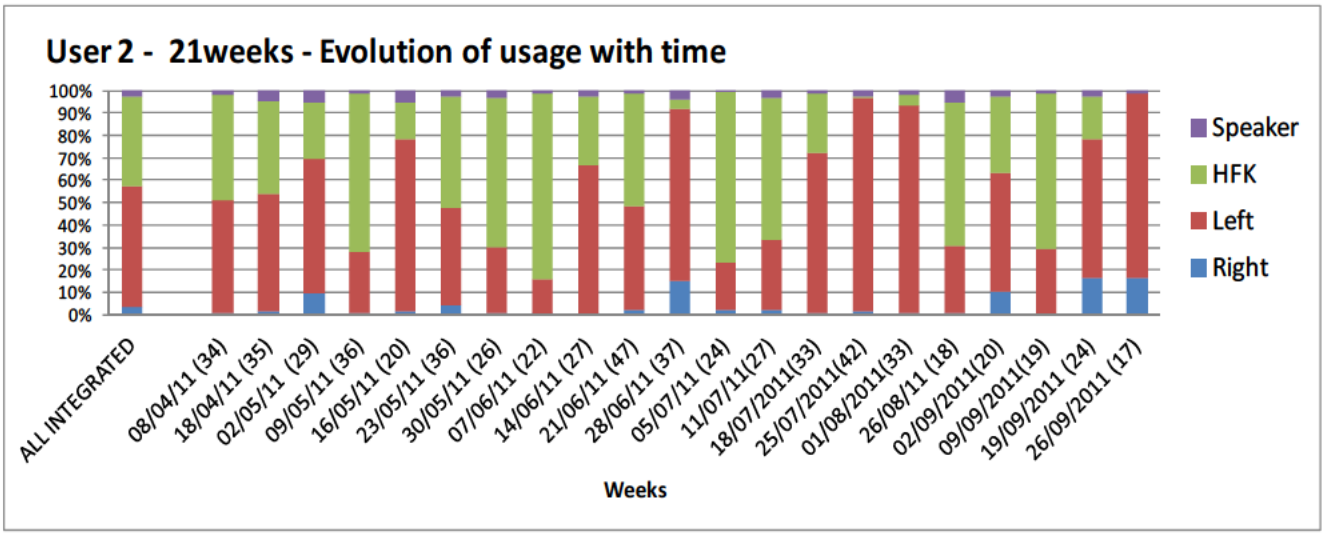

Figure 9: Phone use assessment over several weeks using Xmobisense

In Interphone a gridmaster was developed to help tumour localisation in an adult head. Within Mobi-kids we have to handle several child heads at different age. To help a new grid master software (NGMS) has been developed to navigate in the child heads.

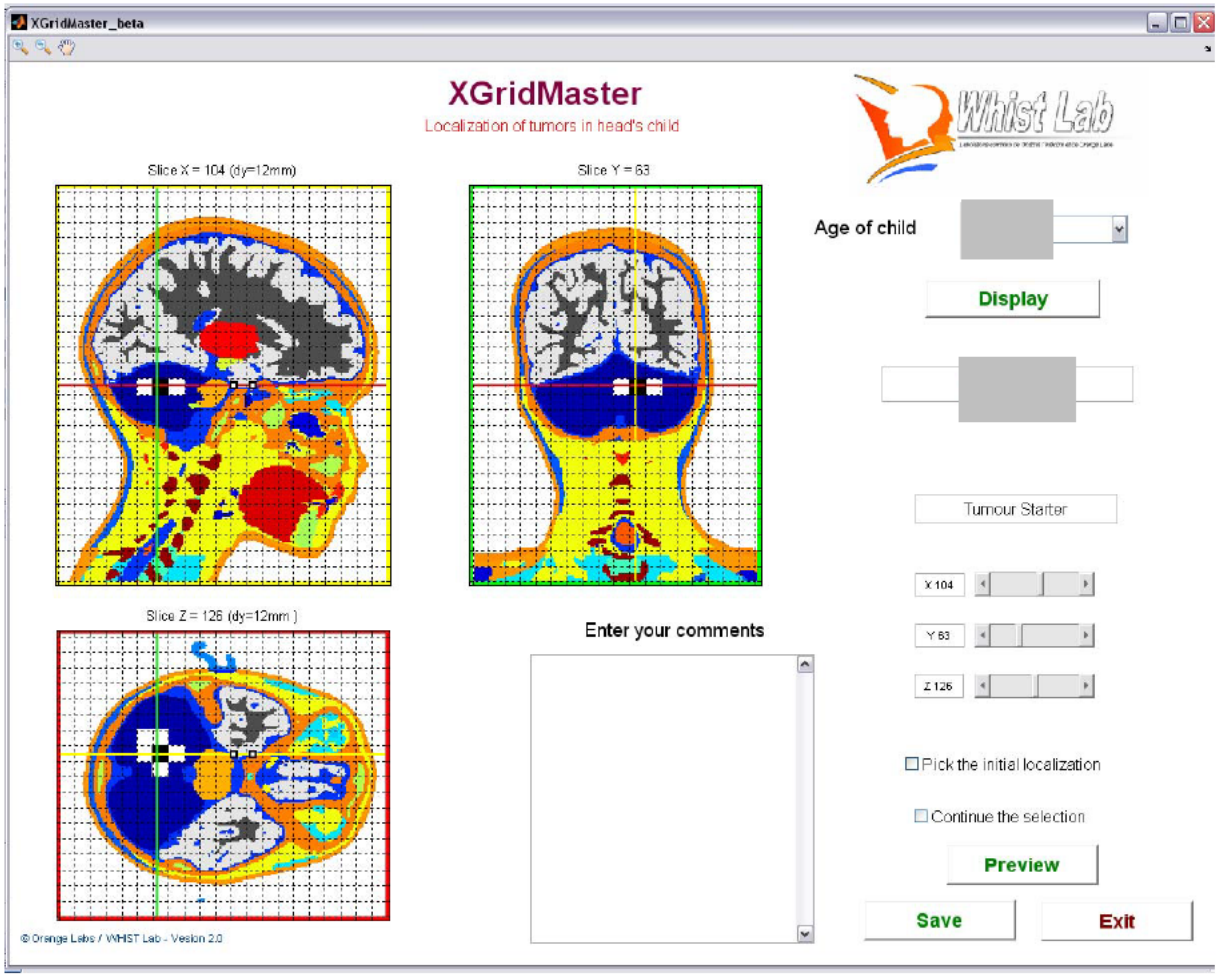

Figure 10: New Grid Master

Exposure algorithms for ELF and RF

The algorithm will provide the exposure gradient tool kit for the epidemiologists to assess ELF and RF exposure of study subjects. An initial discussion document was drafted in preparation for the study review meeting in Sitges in March 2011. The main challenge for both ELF and RF areas is to combine many complex parameters, for instance phone use, call time, number if calls, number of years use, characteristic of network and the way in which phone is used. The approach will follow the Interphone approach in which the exposure is estimated for each phone class in the part of the brain where the tumour is located. The ELF exposure would be considered in terms of induced current density.

For the RF assessment, the position of the antenna is likely to be a key determinant in defining particular classes. The variability of exposure arising from phone type, phone position and various other usage factors is currently being assessed using stochastic dosimetry. Collaborative work on foetal exposure is also being done with the study collaborators from Japan.

Environment and occupational assessments

Discussion has taken place over the reporting period about potential environment and occupational risk factors other than EMF. Some information is collected in the study questionnaire (residential history, farms, crops, animals, etc.) and an additional elective module has been added, in interested countries, concerning water disinfection by-products. Little other information was requested in the questionnaire because of difficulties in adequately evaluating exposures. It is planned however to link occupational history (of the subjects and of their parents) to existing job-exposure matrices and to geocode addresses of the subjects in order to link these, where possible, to maps of relevant exposures (such as land-use maps). A draft protocol has been developed and discussed both at the meeting of the exposures assessment subcommittee and at the full Consortium meeting in March 2011. Partners were asked to provide information about available geocoded databases which could be used for exposure assessment in their country. Based on this and on a review of responses in questionnaires in the first 6 months of data collection (providing information on possible prevalence of exposure situations of interest), it is planned to finalise the exposure assessment protocol in early 2012.

Deviations in schedule and use of resources

WP4 is behind schedule due to equipment delays and because the validation tests took longer than expected. This is not expected to unduly delay the main deliverables for the work package, the completion of Gridmaster cartographies and exposure toolkit and will not affect the success of the project as data collection under WP1 is still underway.

WP5 – Data analysis & management

WP leader: [redacted] - CREAL

Participant number	**1**	11
Participant short name (WP leader in bold)	**CREAL**	GERTNER INSTITUE
Person-months per participant	**10.25**	1.00

Work during this reporting period focused on developing an electronic database using FileMaker Pro for the main and parental questionnaires. Additional databases are included in the electronic application, including:

- a follow-up registry;
- a non-response questionnaire database;
- a mobile phone operators validation study database;
- a clinical questionnaire database; and
- a catalogue of mobile phones.

Developing the final database was delayed as there were delays in developing final versions of the questionnaires (discussed in WP2).

Once a sufficiently complete version of the database was ready in fall 2010, it was sent to centres for intensive testing. After testing, centres provided detailed feedback (approximately 250 comments) to CREAL. These remarks were received and addressed throughout the winter of 2010-2011. This process was repeated in spring 2011, with each centre being assigned a section of the electronic application to test thoroughly. Over 100 suggestions for improvement were received and addressed.

One comment that was uniformly heard from centres was the necessity for consistent validation checks. A multitude of validation checks were built into the database to verify information is logical as the interview is taking place (e.g., dates cannot be in the future; if a participant reported an exposure, must respond ‘yes’ to at least one specific exposure; etc). It was deemed to be worth the investment of time and effort (to develop these validations) to ensure the quality and completeness of the interview data (see Figure 11 for an example of a validation check in effect, with a warning message).

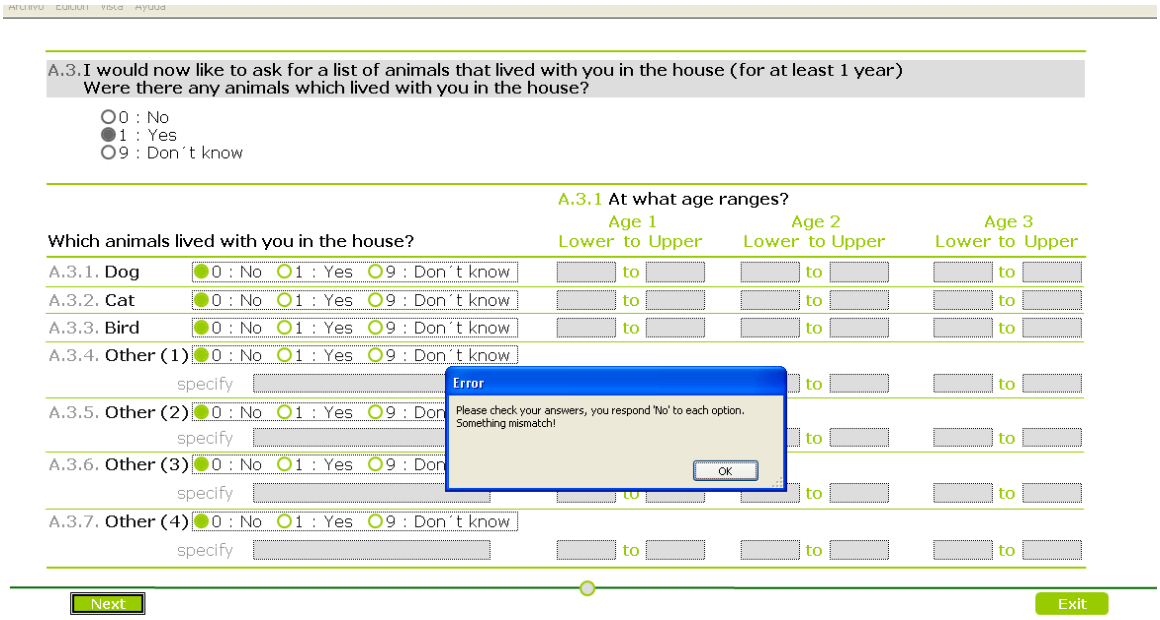

Figure 11: Example of a warning message in MOBI-KIDS electronic application (validation check)

Another frequent comment was the need to translate the entire application into the various local languages to allow the interviewer to use the electronic database as s/he would use the translated paper version. In FileMaker Pro, translations are done by copying each original presentation (in English), saving each presentation with a different name, and then changing the text in the 'local language' (copied) presentations. The specific translation method varies depending on the type text (i.e. the question itself, multiple-choice responses ('lists'), or a script that changes based on a previous response). Detailed instructions have been prepared to explain to study coordinators how to translate the application.

Finally, thorough interviewer instructions for using the electronic database application are being prepared.

The final version of the electronic database application and accompanying instructions are expected to be ready by fall 2011.

Deviations in schedule and use of resources

This WP is slightly behind schedule as the final database depended on having final versions of all questionnaires.

Use of resources in this WP is slightly higher than anticipated because of the complexity of the questionnaire and database and the need to ensure that the database is easily usable, can be translated to all the study languages and incorporates all necessary validations.

WP6 - Dissemination

WP leader: [redacted] *– LMU*

Participant number	1	2	**6**	8	10	11
Participant short name (WP leader in bold)	CREAL	FIMIM	**LMU**	UNITO	UOA-SARG	GERTNER INSTITUE
Person-months per participant	0.75	2.21	**4.00**	1.14	0.46	0.20

For dissemination, the continuous objectives of the project are to:

- Update the scientific community about the rational, concept and results of MOBI-KIDS study
- Raise public awareness abut the current state of science in the discussion on mobile phone exposure and heath especially in children and adolescents.
- Inform the patients about the ongoing study and, later on, on its results
- Inform the stakeholders, decision makers and experts in the public health field about the background, design and the results of the study.

An update on the communication plan (D6.4 Update Plan for the use and dissemination of results) was prepared at the beginning of the 2nd reporting period, with a focus on presenting the project in order to build awareness rather than seeking for influence at the early stages of the project. The plan has been implemented satisfactorily, thus guiding all dissemination efforts in the project and ensuring its consistency and effectiveness.

The number of activities carried out by partners has increased in comparison to the first reporting period. Consequently, all the communication tools developed have been extensively used in 76 dissemination activities carried out from March 2010 to August 2011, of a total of 119 activities undertaken since the project started.

A specific protocol for the generation of high quality scientific publications, including review and authorship policies, has been prepared in collaboration with all partners.

Study website

The website is continuously used for internal and external communication. Regarding the latter, a new section called “Job Opportunities” has been built. This section offers every partner institute the possibility of publishing job offers (e.g. research assistants and fieldworkers.) within the MOBI-KIDS project. The internal area (Intranet) is constantly used by the members of the study consortium. All relevant documents, for example deliverables to the EC, updates of the study protocol or the manual for the use of the database application are uploaded to the Intranet so that they are disposable for the cooperating

institutes as soon as they are finalised. Also documentation related to the project meetings is made available.

Video conferencing

Skype videoconferences have been used for communication within the project. During the reporting period, follow-up to the interviewer training workshops was carried out with periodic Skype conference. This means that the fieldwork coordinators of the different partner countries discussed via Skype how to teach their interviewers in conducting the interviewer. Furthermore, questions that arose during the interviews were discussed during regular Skype conferences.

Raise public awareness

The second major aim of this WP was to further raise public awareness about the project. This was done by presenting MOBI-KIDS during scientific conferences, meetings of stakeholders, and in media targeting the general public. In several countries (e.g. Germany, Israel, Spain) a version of the study flyer targeting especially children was created. This flyer aims to ensure that also the youngest brain tumour patients that are eligible for participating in the study receive appropriate information about the study.

In addition, other stakeholders were continuously kept informed about the study. In different participating countries the background, aims, and methods of the study were presented at conferences of neurosurgeons, oncologists, neuro-oncologists, and among stakeholders in the fields of electromagnetic fields and epidemiology/ public health. Scientific community was informed about the study for example through a presentation of MOBI-KIDS at the ICNIRP (International Commission on Non-Ionizing Radiation Protection) 2011 conference on non-ionizing radiation and children's health, at the International Congress on Radiation Research in August 2011 in Warsaw and at the ISEE (International Society for Environmental Epidemiology) 2011 congress in Barcelona, Spain.

Information about the study has been furthermore spread among the general public. In different countries TV or radio programmes informed about the study, e.g. through interviews with researchers of the MOBI-KIDS study. Major newspapers have published articles or interviews with project members. This has been the case especially for France and Spain due to the project coordination being in Spain and having more impact on local press.

A second press release announcing the start of the field phase was published in Germany in January 2011.

A complete overview about all dissemination activities during the second study period are available in the dissemination activities spreadsheets, periodically uploaded on the website (Intranet) and in SESAM, the European Commission online reporting tool.

Deviations in schedule and use of resources

Work in this work package is on schedule. Deliverables D6.8 and D6.9 has been finalized in autumn 2011. Deliverable D6.7 is also in progress and will be submitted to the EC through deliverable D2.6.

WP7 - Project Management

WP leader: [redacted] –FIMIM

Participant number	1	**2**	3
Participant short name (WP leader in bold)	CREAL	**FIMIM**	UU
Person-months per participant	0.25	**5.39**	0.30

A detailed presentation of project management can be found in section 2.3 - Project Management below.

2.3 Project management during the period

Project Management in MOBI-KIDS is essentially centred on WP7. During the second period of the project, management work has continued with a view on adequate project progress, comprising:

- Follow-up of activities and monitoring of compliance with the work plan, planned resources and time schedule, promoting as far as possible the synergy between different activities and efficiency throughout, in close co-operation with the Scientific Co-ordination.
- Support to [redacted] in the liaison with the EC Project Officer.
- Submission of project deliverables through the SESAM application and follow-up of milestones achievement.
- Consensus building activities, and mediation, especially for what refers to financial and legal issues.
- Fostering communication within the Consortium. Continuous maintenance of organisation charts, contact lists and a repository of important documents and tools for partners at the MOBIKIDS website (Intranet).
- Meetings organisation, including meetings minutes production, logistics arrangements, upload of presentations to the Intranet of web site.
- Completion of administrative and financial period report for the first year of the project, including iterations in response to the EC comments, entering data into online SESAM application, resolving issues, etc.
- Financial management: payments calculation and distribution, follow-up of budget consumption, assistance to partners. Preparatory work for administrative and financial periodic reports of the second periodic report.
- In close co-operation with the Scientific Co-ordination, promotion of linkage to other national and international initiatives.

For all of these tasks, the planned “tandem” leadership structure with the Scientific Coordination has been key to ensure unified project steering and coherence throughout. Operatively, this is achieved by frequent communication between [redacted] (frequent briefings), but it has also extended during the second Reporting period to direct communication between members of the respective teams at CREAL and FIMIM.

The list of meetings held is as follows:

- 3rd Exposure Assessment Subcommite (Easub) Meeting. Sitges (Barcelona), Spain. 28 April 2010.
- 2nd Consortium meeting. Sitges (Barcelona), Spain. 29 -30 April 2010.
- 4th Easub Meeting. Barcelona, Spain. 10 -11 November 2010.
- 5th Easub Meeting (EMF only). Barcelona (Spain). 9 -10 March 2011.
- 6th Easub Meeting. Sitges (Barcelona), Spain. 30 March 2011.

- 3rd Consortium meeting. Sitges (Barcelona), Spain. 31 March – 1 April 2011.
- (Scheduled) 3rd Episub Meeting. Barcelona, Spain. 26 – 27 October 2011.
- (Scheduled) 7th Esapub Meeting. Barcelona, Spain. 26 – 27 October 2011.
- (Scheduled) Project Board Meeting. Barcelona, Spain. 26 October 2011.

For all these meetings, hosting has been supported, minutes recorded, and materials have been compiled and placed on the MOBIKIDS website.

Additionally, workshops, WP-specific and bilateral meetings have been held as needed (including teleconferences as appropriate), plus cross-WP meetings on topics of particular interest or when a rapid consensus was needed for convenience (e.g. Interviewer Training Workshops in April 2010 and March 2011; Fieldwork coordinator meeting on 30 March 2011).

WP Leaders have been given autonomy to organise the work within their respective WPs in the way they think is best. Coordination of WPs has been achieved via Consortium Meetings, and by direct interaction with .

As regards payments, two payments have been made to partners in the period. According to the provisions of the Consortium Agreement, the pending portion of the pre-financing (10% of the total project funding) was distributed to each partner in March 2010. A second payment was transferred to partners in September 2010, according to the first interim payment received from the Commission after approval of the first periodic report and corresponding justifications.

Regarding dissemination and use of results, including the project website, the activity of the Consortium has been remarkable. Numerous dissemination activities have been undertaken and can be consulted in the Intranet of the website. This list of dissemination activities has been also introduced in the European Commission online reporting tool, SESAM. More information can be found in the WP6 heading in section 2.2 of this report.

The number of person-months spent in the project during the second Project period follows generally the original plans and the trends observed in the previous reporting period. An effort breakdown per WP per partner is provided in Table 1 below. The total effort spent in RP2 is slightly over 255 person-months, 33% of the total effort planned for the project. Effort consumption has somewhat increased with respect to that of RP1, reflecting the 'performing' phase that the Consortium has entered in a period in which the central deliverables of the core WPs are being produced. Effort figures per partner reflect some heterogeneity derived from the different involvement of partners in the activities. Cumulative effort spending rises to 46% of the total effort planned.

As regards to budget consumption, the total costs incurred in during the second period (see form Cs attached) as reported by partners are currently estimated at over 1,600,326€ representing approximately 28% of the total project budget. Cumulative budget consumption rises to 40% of the total budget planned, in line with the effort consumption figures.

Section 4 below offers details of the costs reported on a per partner basis, and it shows that the vast majority of costs during the period correspond to personnel costs and travel and subsistence costs related with the project meetings.

TABLE 1. PROJECT PERSON/MONTHS TABLE																
	CREAL	FIMIM	UU	FT	HPA	LMU	MUV	UNITO	ARECEA	UOA-SAGR	GERTNER INSTITUTE	UOTTAWA	MONASH	AUCKLANDUNI	**TOTAL Actual efforts RP2**	TOTAL Planned efforts whole project	*% of actual efforts per WP*
WP1	60.32	0.00	10.70	0.00	0.00	13.80	15.00	20.33	12.80	10.24	11.40	8.40	12.00	0.00	**174.99**	446.0	***39%***
WP2	3.75	0.00	0.00	0.63	0.00	0.00	0.00	1.45	0.50	0.00	4.00	0.00	3.00	0.00	**13.33**	60.0	***22%***
WP3	0.50	0.00	5.10	0.00	0.00	0.00	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	**7.30**	54.0	***14%***
WP4	5.71	0.00	0.50	3.73	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	**34.94**	48.0	***73%***
WP5	10.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	**11.25**	80.0	***14%***
WP6	0.75	2.21	0.00	0.00	0.00	4.00	0.00	1.14	0.00	0.46	0.20	0.00	0.00	0.00	**8.76**	53.0	***17%***
WP7	0.25	5.39	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**5.94**	34.0	***17%***
TOTAL Actual efforts RP2	**81.53**	**7.60**	**16.60**	**4.36**	**22.00**	**17.80**	**15.00**	**24.62**	**13.30**	**10.70**	**16.60**	**8.40**	**18.00**	**0.00**	**256.51**		***33%***
TOTAL Planned efforts whole project	141	38	76	9	21	97	37	49	66	31	61	51	67	31		775.0	
% actual efforts per partner	***58%***	***20%***	***22%***	***48%***	***105%***	***18%***	***41%***	***50%***	***20%***	***35%***	***27%***	***16%***	***27%***	***0%***			

3 Deliverables and milestones tables

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
7.1	Minutes of the kick-off meeting	V5	7	FIMIM	R	CO	M3	19/06/2009	Submitted	Yes	
7.2	Project handbook	V1.4 V1.5	7	FIMIM	R	RE	M4	09/10/2009 26/10/2009	Submitted	Yes	Updated version submitted (v1.5) (26/10/2009)
2.1	Core protocol	V2	2	GERTNER INSTITUTE	O	PU	M6	13/07/2010	Submitted	Yes	
2.2	Study questionnaire	V1 V2	2	GERTNER INSTITUTE	O	PU	M6	09/10/2009 08/07/2010	Submitted	Yes	Updated version submitted (v2) (July 2010)

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
4.1	Input to the questionnaire design	V1	4	HPA	O	RE	M6	29/06/2010	Submitted	Yes	Exposure Assessments (France Telecom and UK Health Protection Agency-UK) have provided input to the questionnaire before and during the Exposure committee meetings. Their input, as questions and suggestions, has been incorporated in LF-RF sections on the questionnaire. The minutes of the Easub meeting was submitted as deliverable.
6.1	Set-up of the web conference tool	V1	6	LMU	O	CO	M6	25/01/2010	Submitted	Yes	
6.2	Webpage set-up	V2	6	LMU	O	PU with CO parts	M6	16/07/2010	Submitted	Yes	www.mbkds.net
6.3	Project brochure and flyers	V1 V2	6	LMU	O	PU	M6	12/10/2009 26/05/2011	Submitted	Yes	Updated version submitted (v2) (26/05/2011)

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
2.3	Translation and back-translation of the questionnaire finalised by all centres	V1	2	GERTNER INSTITUTE	O	PU	M9	26/05/2011	Submitted	Yes	
1.1	Ethics approvals	V2	1	CREAL	O	PP	M12	26/05/2011	Submitted	Yes	Updated versions of the ethics approval status will be submitted

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
2.4	Showcards and procedures document for conduct of study in the participating countries	-	2	GERTNER INSTITUTE	O	RE	M12	13/07/2010	Submitted	Yes	This deliverable has been changed somewhat: - Because of the enormous number of mobile phones which have been commercialized in the study countries, the showcards have been replaced by an electronic mobile phone database. Development of this database is proceeding and is expected to be completed by the start of data collection in the participating countries (month 19/20). - It was felt more logical to include the national procedures in the common core protocol rather than have them as a separate document. They are therefore already available in D2.1.

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
2.5	Validation study protocol	v2	2	GERTNER INSTITUTE	O	PU	M12	29/06/2010	Submitted	Yes	
5.1	Questionnaire and follow-up databases	V2	5	CREAL	O	RE	M12	29/11/2011	Submitted	Yes	
5.2	Database validation tools	V1.1	5	CREAL	O	RE	M12	17/11/2011	Submitted	Yes	
6.4	Update Plan for the use and dissemination of results	V1	6	LMU	R	CO	M12	07/06/2010	Submitted	Yes	
6.5	Press information about the study	V2	6	LMU	O	PU	M12	06/07/2011	Submitted	Yes	
6.6	Information about the study to stake holders	V1	6	LMU	R	PU	M12	05/05/2010	Submitted	Yes	
7.3	1st periodic report and financial statements	V6	7	FIMIM	R	CO	M14	21/07/2010	Submitted	Yes	
5.3	Other databases (NRQ, validation)	V1.1	5	CREAL	O	RE	M15	17/11/2001	Submitted	Yes	
1.2	Periodic summaries of data collection	V1.1	1	CREAL	R	RE	M18	02/09/2011	Submitted	Yes	

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
3.1	Interim status	V1.3	3	UU	R	RE	M18	17/11/2001	Submitted	Yes	
6.7	Methods paper in scientific journal submitted		6	LMU	O	PU	M18	NA	No submitted	Yes	This deliverable has been erroneously included in WP6. It is in fact Deliverable 2.6
1.3	Periodic summaries of data collection	V1.1	1	CREAL	R	RE	M24	02/09/2011	Submitted	Yes	
2.6	Manuscript on the study methodology		2	GERTNER INSTITUTE	R	PU	M24	01/03/2012	No submitted	Yes	Delayed due to delays in the finalisation of the study protocol and questionnaire
3.2	Interim report on questionnaire responses		3	UU	R	RE	M24	28/02/2012	No submitted	Yes	Delayed due to delays in the finalisation of the questionnaire and in obtaining ethics approvals for starting field work
4.2	Report on RF measurements and modelling	V1	4	HPA	R	RE	M24	18/11/2011	Submitted	Yes	
4.3	Report on ELF measurements and modelling	V1	4	HPA	R	RE	M24	29/11/2011	Submitted	Yes	
5.4	Interim summary of data collection	V1	5	CREAL	R	PP	M24	29/11/2011	Submitted	Yes	

TABLE 2. DELIVERABLES

Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contractual Yes/No	Comments
6.8	Press information about the stage of the study	V3	6	LMU	O	PU	M24	17/11/2011	Submitted	Yes	
1.4	Periodic summaries of data collection	V1.1	1	CREAL	R	RE	M30	29/11/2011	Submitted	Yes	
3.3	Interim report on data validation issues		3	UU	R	RE	M30		No submitted	Yes	
6.9	Intermediate report on results for stakeholders including policy DGs of the European Commission	V4	6	LMU	R	CO	M30	17/11/2011	Submitted	Yes	
7.5	Updating of risk, mitigation and contingency plans	V4	7	FIMIM	R	CO	M30	05/12/2011	Submitted	Yes	

TABLE 3. MILESTONES

Milestone no.	Milestone name	Work package no	Lead beneficiary	Delivery date from Annex I dd/mm/yyyy	Achieved Yes/No	Actual / Forecast achievement date dd/mm/yyyy	Comments
6.1	Website set-up	6	LMU	01/08/2009	Yes	16/07/2010	D6.2
2.1	Study documents finalised	2	GERTNER INSTITUTE	28/02/2010	Yes	01/09/2010	Updated version of the D2.1 will be submitted
1.1	Ethics approvals obtained	1	CREAL	28/02/2010	Partially	26/05/2011	Updated version of the D1.1 will be submitted
4.1	Completion of ELF and RF measurements and modelling	4	HPA	28/02/2011	Yes	29/11/2011	D4.2 and D4.3

4 Explanation of the use of the resources

Below it is provided an explanation of personnel costs, subcontracting and any major direct costs incurred by each beneficiary, such as the purchase of important equipment, travel costs, large consumable items, etc. linking them to work packages.

These are listed in the following tables:

TABLE 4.1 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY CREAL FOR THE PERIOD 01/03/2010-31/08/2011

Work Package	Item description	Amount in € with 2 decimals	Explanations
1,2,3,4,5,6, 7	Personnel direct costs	217,853.52€	Salaries of: (4.0 p/m) 0.5p/m) (9 p/m), (1.46 p/m) (4 p/m) (18 p/m) (3.07p/m) (18 p/m) (9 p/m) (6 p/m) (2.5 p/m) (6 p/m)
1, 2	Subcontracting	12,049.67 €	Cost related to protocol translation (1,875.78€) and payment for Universities Agreements: Universitat de Valencia: 5,673.89 € Instituto de Salud Carlos III: 4,500.00€
1,2,3,4,5,6	Travel and subsistence costs	22,973.38 €	Travel and subsistence related to field work (WP1): 799.20€ Travel and subsistence related to congresses and dissemination (WP6):259.13€ Travel and subsistence related to Project management (new countries): 162.29€ EASUB + 2nd Consortium + Interviewer Training Workshop meetings (Sitges-April 2010): 11805.65€ Exposure Assessment Subcommittee (Barcelona-Nov.2010): 515.00€ Spanish PI and field work coordinator meeting (Jan.2010): 474.4€ EASUB (EMF) meeting (Barcelona-March 2011): 545.1€ EASUB + 3rd Consortium + Interviewer Training Workshop + Fieldwork Cooodinator meetings (Sitges-2011): 7740.77€
1	Travel and subsistence Interviewer training meeting	2,530.67 €	Interview Training Course Huelva, January 2010: 292,5€ Interview Training Course Huelva, October 2010: 2069,18€ Interview Training Course Barcelona June 2011: 168.99€
1,2,3,4,5	Other direct costs	956.85 €	Consumables: Internet domain, domain registration, mouse and laptop bags (270.01€) and Expenditures of external collaborators (686.84€)

1,2,3,4,5	Equipment	856.04 €	Equipment purchase (depreciation costs)
	Indirect costs	147,102.27€	60% rate for indirect costs
	TOTAL COSTS	404,322.41€	

TABLE 4.2 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY FIMIM FOR THE PERIOD 01/03/2010-31/08/2011

Work Package	Item description	Amount in € with 2 decimals	Explanations
6,7	Personnel direct costs	24,409.00€	Salaries of [redacted] (4,15 p/m), [redacted] (3,45 p/m)
6	Subcontracting	1,656.00€	Design and Print of Spanish Project Flyer
7	Other direct costs	40.41€	Travel meetings costs and couriers
	Indirect costs	14,669.65€	60% rate for indirect costs
	TOTAL COSTS	40,775.06€	

TABLE 4.3 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY UU FOR THE PERIOD 01/03/2010-31/08/2011

Work Package	Item description	Amount in € with 2 decimals	Explanations
1,3,4,7	Personnel costs	74,038.13€	Salaries of [redacted] 14.1 p/m- [redacted] € and 1.7 p/m ([redacted] (0.5 p/m – [redacted] (0.3 p/m – [redacted]
1,3,4	Other direct costs	5,544.28€	Travel meetings and congresses
1,3,4	Remaining direct costs	3,078.02€	ICT Hardware, conference call costs, stationary, reproduction, postage
	Indirect costs	98,104.35	Actual indirect costs
	TOTAL COSTS	180,764.78€	

TABLE 4.4 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY FT FOR THE PERIOD 01/03/2010-31/08/2011

Work Package	Item description	Amount in € with 2 decimals	Explanations
2,4	Personnel costs	31,048.13€	Salaries of [redacted] for an effort of 4,36 p/m
4	Other direct costs	2,991.19€	Travel meetings costs: 6 Travels to Project meetings: Barcelona (04/2010)(2), Barcelona (11/2010) (1), Barcelona(03/2011)(2), Barcelona (04/2011)(1)
	Indirect costs	17,386.96€	Actual indirect costs
	TOTAL COSTS	51,426.28€	

TABLE 4.5 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY HPA FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
4	Personnel direct costs	90,366.00€	Salaries of [redacted]. Total: 22 p/m
4	Other direct costs	4,273.00€	Travel meetings costs: [redacted] London – Barcelona, 27-30 April and 9-11 Nov, 2010. Two return flights for [redacted] London – Barcelona, 27-30 April and 9-11 Nov, 2010. Two return flights for [redacted] London – Barcelona, 8-11 March and 30 Mar – 1 April 2011.
	Indirect costs	56,783.00€	Actual indirect costs
	TOTAL COSTS	151,442.00€	

TABLE 4.6 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY LMU FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
1,6	Personnel direct costs	60,973.85€	Salaries for [redacted], full-time, 7 p/m; [redacted] part-time, 2.25 person months) [redacted], part-time, 7 p/m). [redacted] part-time, in total 1,55 p/m). Total: 17,80 p/m
1	Other direct costs	7,220.91€	MOBI-KIDS meetings and visits of the cooperating hospitals in whole Germany, fees for Ethics Commissions.
	Indirect costs	40,916.85€	60% rate for indirect costs
	TOTAL COSTS	109,111.61€	

TABLE 4.7 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY MUV FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
1	Personnel direct costs	70,017.30€	Salaries of: [redacted] 10 p/m; [redacted], 5 p/m. Total: 15 p/m
1	Other direct costs	1,412.35€	Cost related to the project meetings
	Indirect costs	42,857.79€	60% rate for indirect costs
	TOTAL COSTS	114,287.44€	

TABLE 4.8 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY UNITO FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
1,2,3,6	Personnel direct costs	82,165.13€	Salaries of: - (3,08 p/m) - (3,04 p/m) - , (12 p/m) - (3 p/m) - (3,5 p/m)
1,2	Other direct costs	2,105.55€	Costs related to the meeting organisation of "Mobi-kids Italia", 28-29/09/2010 Villa Gualino (Torino)
1,2	Remaining direct costs	548.26€	Travel and subsistence costs related to the participation of in the 3rd Consortium Meeting Barcelona, 30/3/2011-01/04/2011. Meetings with hospital physicians to organize recruitment: - 03/05/2011, AO Santi Antonio e Biagio e Cesare Arrigo di Alessandria; - 09/05/2011, Ospedaliera S. Croce e Carle di Cuneo.
	Indirect costs	50,891.36€	60% rate for indirect costs
	TOTAL COSTS	135,710.30€	

TABLE 4.9 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY ARECEA FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
1,2	Personnel costs	67,926.44€	Salaries for - - Salaries of State tax on total volume of salary paid by employers 529,00€
1,2	Other direct costs	11,582.60€	Travel and accommodation costs
1,2	Remaining direct costs	4,036.13€	Back translation, and depreciation costs for hardware, software and furniture
	Indirect costs	16,709.03€	20% rate for indirect costs
	TOTAL COSTS	100,254.20€	

TABLE 4.10 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY UOA-SAGR FOR THE PERIOD 01/03/2010-31/08/2011

Work Package	Item description	Amount in € with 2 decimals	Explanations
1,6	Personnel direct costs	33,184.41€	Salary of [redacted] for 4 p/m Salary of [redacted] for 3,24 p/m Salary of [redacted] for 0,76 p/m Salary of [redacted] for 2,7 p/m: [redacted]
1,6	Travel costs	3,716.65€	[redacted] travelling to Barcelona for two meetings (April 2010 and March 2011) [redacted] travelling to Barcelona for two meetings (April 2010 and March 2011)
1	Consumables	152.50€	Blood collection bottles
1,6	Remaining direct costs	140.00€	Registration fees for the participation of [redacted] to the 22nd Panhellenic Conference of the Greek Society for Social Pediatrics and Health Promotion (November 2010)
	Indirect costs	22,316.14€	60% rate for indirect costs
	TOTAL COSTS	59,509.70€	

TABLE 4.11 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY GERTNER INSTITUTE FOR THE PERIOD 01/03/2010-31/08/2011

Work Package	Item description	Amount in € with 2 decimals	Explanations
1,2,5,6	Personnel direct costs	66,504.56€	Salaries of [redacted] – A total of 16,6 p/m
1,2	Other direct costs	4,886.64€	Travels costs related to: - 2nd Consortium Meeting (April 2010, Sitges, Spain) - Field work coordinators meeting / New countries: interviewers' training workshop / 3rd consortium meeting (March 2011, Sitges, Spain).
1,2	Remaining direct costs	796.42€	
	Indirect costs	14,437.52€	Simplified Method
	TOTAL COSTS	86,625.14€	

TABLE 4.12 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY UOTTAWA FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
1	Personnel direct costs	33,559.69€	Salaries for): 8,4 p/m
1	Other direct costs	3,215.21€	Travel costs project meetings: travels for the 2nd Consortium meeting in Sitges, Spain March 29- April 1, 2011.
	Indirect costs	890.23€	Actual indirect costs
	TOTAL COSTS	37,665.13€	

TABLE 4.13 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY MONASH FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
1,2,4	Personnel direct costs	80,000.00€	Salaries of over the 18 month period.
	Indirect costs	48,000.00€	60% rate for indirect costs
	TOTAL COSTS	128,000.00€	

TABLE 4.14 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY AUCKLANDUNI FOR THE PERIOD 01/03/2010-31/08/2011			
Work Package	Item description	Amount in € with 2 decimals	Explanations
No costs incurred in during the period			

4.1 Adjustments to previous periods

TABLE 5.1 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY CREAL FOR THE PERIOD 01/03/2009 TO 28/02/2010			
Work Package	Item description	Amount in € with 2 decimals	Explanations
5	Personnel costs	134.98€	Correction on salaries
1,2	Other direct costs	-44.59€	Correction on Travel and subsistence cost
2	Other direct costs	192.61€	Correction on depreciation costs
	Indirect costs	169.80€	60% rate for indirect costs
	TOTAL COSTS	452.80€	

5 Financial statements – Form C and Summary financial report

Please see PDF file with all the Form Cs and the summary of costs reported.

6 Certificates

Beneficiary	Organisation short name	Certificate on the financial statements provided? yes / no	Any useful comment, in particular if a certificate is not provided
1	CREAL	Yes	Expenditure threshold reached
2	FIMIM	No	Expenditure threshold not reached
3	UU	No	Expenditure threshold not reached
4	FT	No	Expenditure threshold not reached
5	HPA	No	Expenditure threshold not reached
6	LMU	No	Expenditure threshold not reached
7	MUV	No	Expenditure threshold not reached
8	UNITO	No	Expenditure threshold not reached
9	ARECEA	No	Expenditure threshold not reached
10	UOA-SARG	No	Expenditure threshold not reached
11	GERTNER INSTITUTE	No	Expenditure threshold not reached
12	UOTTAWA	No	Not Applicable
13	MONASH	No	Not Applicable
14	AUCKLANDUNI	No	Not Applicable