MASCOT

Multilateral association for studying health inequalities and enhancing north-south and south-south cooperation

Project coordinator: COHRED

Publishable Summary

Preparation Date: **May 2014**
Reporting period: From **October 2011** To **April 2014**

TABLE OF CONTENT

Grant Agreement Number: 265558

SUMMARY

The health of vulnerable groups, the inequalities present in society, and the slow progress towards achieving the health- related Millennium Development Goals (MDGs), are concerns that need to be addressed. This is especially true for low and middle-income countries. Some countries have made advances, but these successes may remain unknown to other countries that could benefit from their experience. Higher levels of collaboration would help but can be difficult to achieve.

The MASCOT project gathered 11 partners from 3 geographical areas (Europe, Latin America & Africa), an expert advisory board and additional expertise as needed to answer a specific problem: how to better address health inequalities in maternal and child health (MCH) through research, knowledge transfer and country collaboration.

The project identified countries in the three regions, and went through a process of standardization and quality control. Mapping activities were carried out in each country in order to assess the current situation of MCH inequalities, to map National Research for Health Systems (NRHS), to identify institutions and research teams performing research in the area of MCH, to detect promising projects and research results as well as an evaluation of strategies, programs and policies implemented to tackle MCH inequalities.

This resulted in:

A methodological guideline to be implemented in country for evaluating their status in terms of health inequalities affecting mothers and children, national health research systems and their role in MCH research and impact of research on the development of policies addressing inequalities
National and regional reports of MCH inequalities status in the selected countries,
A database mapping inequalities in those countries, to act as a decision-support tool for policy makers and researchers.
A systematic review of relevant MCH literature in LMIC and HIC regions,
A set of strategy briefs summarizing the MCH inequalities in each country, alongside recommendations of potential strategies and co-operation opportunities
A set of collaboration activities between 4 countries (Guatemala and Costa Rica, Ghana and Mozambique) which served as an introduction and exchange of ideas about potential strategies to transfer

An important part of MASCOT was to stimulate multi-lateral collaboration and knowledge transfer as a key activity of the project. All along, different tools such as meetings, workshops, partnering event, website, electronic newsletters and brochures were used to communicate and promote the exchange of knowledge and best practice between health stakeholders and policy-makers.

CONCEPT & OBJECTIVES

The World Health Organisation (WHO) defines health inequalities as "differences in health status or in the distribution of health determinants between different population groups (e.g. racial, ethnic, sexual orientation or socioeconomic groups). Some health inequalities are attributable to biological variations or free choice and others are attributable to the external environment and conditions mainly outside the control of the individuals concerned. In the first case it may be impossible or ethically or ideologically unacceptable to change the health determinants and so the health inequalities are unavoidable. In the second, the uneven distribution may be unnecessary and avoidable as well as unjust and unfair"1.

Considering that such inequalities result in differences for disease incidence, health outcomes, and access to or quality of health care, tackling this issue should be a priority for authorities all over the world, more particularly when affecting children, adolescents and mothers. While significant differences can be exhibited between regions, countries, and continents, health inequalities concern all societies worldwide and a mutualisation of efforts could benefit all governments in their continuing need for efficient strategies and policies based on research evidences.

In this context, the MASCOT project recognizes the necessity of having better coordinating mechanisms for South-South and North-South collaboration aimed at enhancing regional and local infrastructure, capabilities and capacities of research for health, as well as stimulating knowledge transfer and exchange mechanisms between countries and within countries for shaping policies, programs and health actions intended to provide better health and health services. It has therefore planned to stimulate the cooperation between countries from 3 world regions (Europe, Africa and Latin America) by:

- Analysing existent national health research systems and improving the use of research results in the design of policies,
- Identifying strategies that have been successful and that could lead to the development of new and operative policies in different countries,
- Proposing and sharing efficient research-based recommendations in terms of policies,

Enhancing transfer of knowledge between regions and/or countries.

For these purposes, the following specific objectives were established:
To select relevant countries for studying and describing the situation in countries representing the three regions of interest and to standardise the procedures of investigations for allowing efficient fulfilment of the work and comparison between countries
To describe inequalities concerning maternal and child health (MCH) as well as strategies and activities currently put into practice to reduce these inequalities at national scale using appropriate and standardised criteria.
To describe national health research systems (NHRS) and detect dedicated projects and research teams working on MCH inequalities.
To identify the good practices in addressing health inequalities and evaluate their roles in the development of measures (policies or recommendations) that are and/or that should be implemented for tackling MCH inequalities.
To develop and suggest country-specific strategies derived from successful interventions and policy advices for strengthening NHRS, the use of research results for decision-making and the capacity to address MCH inequalities.

To implement specific activities to stimulate the multi-lateral collaboration between countries and institutions in Africa, Latin America and Europe, enabling countries to make better use of research in addressing health inequalities in maternal and child health.

[1] http://www.who.int/hia/about/glos/en/index1.html

S&T RESULTS

WP1: Methodology standardisation and quality control

General objective

The general objective of this WP consisted in selecting participating countries, appointing local country experts for implementing MCH-related mapping activities, developing and standardising procedures, tools and methodologies, centralising the data retrieval and storage and controlling the quality of work.

Progress toward objectives and details for each task

Task 1.1.Country selection and expert appointment

The MASCOT kick-off meeting in Geneva in November 3-4, 2011 provided the opportunity to discuss the countries to be involved and the profile of local country experts to be associated.

Country selection

Considering the abundant studies already executed in Europe to analyse MCH indicators, health research systems and national policies aimed at tackling MCH inequalities, partners agreed to limit the implementation of the mapping activities to the African and Latin American continents.

Beside the countries engaged through consortium members (Costa Rica, Mexico, Chile, South Africa, Tanzania, Ghana and Tunisia), a selection of 5 additional countries had therefore been agreed to complete the list of participating countries. The sampling had taken into consideration the geographical representation and different levels of inequalities, which were approximated with the Human Development Index for Inequalities (HDI) calculated by the United Nations Development Program (UNDP). Three distinct clusters were created, excluding European countries of the process. The cut points to define the categories were as follows: High HDI, from 0.7 and higher (0.778 in average), Middle HDI, between 0.3 and 0.7 (0.529 in average), Low HDI, from 0.3 and lower (0.240 in average). Countries were selected using a stratified random sample using 5 sample size scenarios at 95% confidence level, 90% confidence level and 99 confidence level. Initially and using the 95% confidence level, 20 countries were identified and sorted. By consensus, MASCOT partners agreed to include 3 countries with low HDI (Mozambique (HDI=0.155), Guinea-Bissau (HDI=0.166), and Malawi (HDI=0.261)) and 2 countries with middle HDI (Bolivia (HDI=0.3908) and Brazil (HDI=0.509)). Final selection criteria took into consideration the accessibility of data (data already collected by, or accessible to the project partners on specific countries, or through connections allowing data retrieval) and the chances of success in reaching the project objectives, through the concentration of resources in countries where high quality data can be obtained.

Expert appointment

Once countries identified, partners needed to take profit of the know-how of local country experts to carry out the mapping activities. The profile of these experts was defined as follows:

1. Medical/Public health worker with experience in epidemiological research.
2. Living in the selected location.
3. Have computer equipment and Internet access.
4. Local Language Proficiency and English, both verbally and written.
5. With availability of time. (See schedule).
6. Management Software: Excel, Stata, Office.

7. Able to do field work.
8. Owning adherence to scientific excellence (Making sure data are reliable and accurate).

Country experts were selected accordingly by COHRED and EQY after collection of CVs with the contribution of other consortium members. The selected country partners included:

- Wanderley Bernardo for Brazil
- Pr. Eduardo Aranda for Bolivia
- Dignitas International (Felix Limbani) for Malawi
- Pr. Fátima Cuembelo for Mozambique
- Dr. Fernando Muñoz for Chile (Appointed as this expert is based in Santiago and the MASCOT partner is based in Concepción, 500 km away)
- Dr Zacarias Da Silva for Guinea Bissau

T1.2. Standardisation of methodologies, tools and procedures for common understanding

Methodological guideline

In preparation of the mapping activities of WP2, 3 and 4, a handbook with detailed guidelines for implementing the survey, gathering and analysing requested information was developed by EQY in close collaboration with IHCAI (leader of WP2), COHRED (WP3), and INSP (WP4).
The final document entitled "Methodological guidelines for mapping activities" was submitted as deliverable D1.2 and included 5 major sections:

1) Introduction to the survey
2) Questionnaire & guideline for analysing the current status of health inequalities in a country
3) Questionnaire & guideline for analysing a national research for health system (NRHS) and determining how it addresses MCH inequalities
4) Questionnaire & guideline for evaluating the impact of MCH research on the development of national policies and strategies addressing MCH inequalities in a country
5) Guidelines: mapping report outline, methodology and support tools

While initially prepared in English, the guideline was translated into French (EQY), Spanish (INSP), and Portuguese (SPI) for en efficient application in the countries of interest. The guideline was disseminated to local country experts prior the training workshop held in Costa Rica. Based on this common methodology, each local expert produced a country report synthesising the information gathered and analysed in WP2, 3 and 4.

Training workshop and other standardisation meetings

The methodological guideline was presented by COHRED, EQY, IHCAI and INSP during a training workshop held in San José, Costa Rica (March 12-14, 2011) to ensure an efficient and standardised application by country experts.. Different exercises were carried out to make sure to achieve the objectives of the meeting and to familiarise the experts with the activities to be implemented: this included plenary presentations, practical sessions, answering of questions for clarification and discussion about potential problems that may arise in particular situations and alternatives for solutions. All these led to the refinement of the tools.

With the purpose of standardising methodologies in the different regions, HAPI, as responsible for analyzing data at the European level, had also several work meetings with external experts:

- Peter Goldblatt, UCL Centre for Health Equity in London, UK
- Ray Earwicker, Health Inequalities Unit of the Department of Health of England, UK

- David Rivett, Adolescent and Child Health expert, WHO European Regional Office, Denmark.
- Marilena Korkodilos, London Specialised Commission, UK
- Sue Graves, Health Improvement Analytical Team of the Department of Health of England, UK
- Begoña Merino, Ministry of Health, Spain
- Clive Needle, EuroHealthNet, Belgium
- Isabel Yordi, World Health Organization

Input from these meetings was used to identify sources of statistical and other European data for the integrated database and the European Regional report.

T1.3. Data retrieval and storage

This task constituted the first step toward the development of a searchable database in WP5. The outcome is an integrated database resource retrieving data from WP2, 3 and 4 and providing full access and connectivity to all consortium members.

Partner 4 (IHCAI) was responsible for the database architecture design, which included the selection of the most affordable and reliable platform. Currently, the application is set up with SQL Server Express 2012 with Advanced Services. The database infrastructure is completed and a new website was created: www.ihcaimascot.org

The data gathered in this database include:

- Datasets from each local country experts in the framework of WP2, 3 and 4.
- For WP2, given the complexity of the data collection and the time constraints, it was finally agreed to access the UNICEF and DHS surveys or official country raw databases, containing health indicators and health determinants, according to the theoretical matrix proposed in the methodological guidelines.
- For WP2, partner 7 (CHP) established a working relationship with the Human Sciences Research Council in Pretoria (South Africa), which conducts a national-level household survey every four years. Household data on MCH were therefore included.
- For WP4, a link was established with the database developed by partner 5 (INSP) for data retrieval in relation to the online survey.
- For WP4, additional data related to the specific strategies (policies & programmes) identified by country experts was retrieved and integrated into the database resource after the consortium meeting in Johannesburg.
- For Europe, HAPI put together a comprehensive table of sources with European statistical data from EuroStat, WHO, OECD, among others. However, given the number of sources and the methodological issues to compare the data, it was decided that European statistics would not be captured in the database. Instead, the project used analysis performed at the regional level by regional and international organisations, including European Commission projects, WHO Europe, UNICEF, etc.

T1.4. Overall quality control

The most significant strategy in this task is the twin team strategy set up as an association of one local expert from the consortium and one external local expert to jointly review their respective national report to ensure the English language quality, and to identify missing contents or unclear statements. This strategy provided the opportunity for country experts to learn from each other and having the benefot of sharing a review for quality increase. As an example Dr Anggie Ramirez-Morera, from IHCAI (Costa Rica), worked with Dr Wanderley Bernardo (Brazil) with the support of Euroquality (France).

Major results and achievements and major failures

MASCOT presents two types of data: quantitative and qualitative. Traditionally the international agencies present data using only descriptive statistics in our case we present the results of analytical statistics. The analysis by MASCOT team is presented in the country reports. The major failure is in the case of qualitative analysis that we only could complete the inequalities GAP analysis and we unable to complete the inequalities GRADIENTS measure within the countries, representing a deviation of original protocol. This is explained by two main issues : 1- time constrains for adding new UNICEF and DHS surveys analysis, 2- In some cases the sample framework if some the surveys has significant variations which did not enable to combine the analysis in the time.

WP2: Mapping of current status of health inequalities in participating countries

General objective

The objective of WP2 was to assess the current status of health inequalities towards children, adolescents and mothers, and determinants influencing these inequalities. To address these specific aspects, relevant indicators common to all participating countries have been considered.

Progress toward objectives and details for each task

Task 2.1. Mapping of health inequalities in participating countries and Task 2.2. Mapping of MCH inequalities determinants

Data sources

After comprehensive search in both published and grey literature, IHCAI and UCSC realised that both MASCOT and PROGRESS indicators as defined in the proposal were not available for all countries involved in this project. Besides, when data was available, indicators were not standardized. As a conclusion, MASCOT and PROGRESS indicators needed to be redefined. The decision at this point was to identify a common source of information for participating countries. After consultation to partners and local experts, the decision was to explore UNICEF and DHS.

UNICEF surveys contain the following information that match:

- MASCOT indicators:

1) **Maternal mortality ratio**: deaths per 100 000 live births.
2) **Under-five child mortality**: deaths of children under five per 1000 live births.
3) **Children under 5 who are stunted**: percentage of children under five years of age whose height-for-age is below minus two standard deviations from the median of the WHO Child Growth Standards.
4) **Adolescent pregnancy**: number of pregnancies in women from 12 to 19 years of age per 1000 live births.
5) **Met need for contraception**: proportion of women aged 15-49 who have met their need for family planning, *i.e.*, who do not want any more children or want to wait at least two years before having a baby, and are using contraception.
6) **Antenatal care coverage**: number of women who used antenatal care provided by skilled health personnel for reasons related to pregnancy at least once during pregnancy, as a percentage of live births in a given time period.

7) **Care of HIV-positive pregnant women**: antiretroviral prophylaxis among HIV-positive pregnant women to prevent vertical transmission of HIV, and antiretroviral therapy for women who are treatment-eligible. (Not included in the UNICEF modified survey)

8) **Skilled attendant at birth:** a physician, obstetrician nurse or other health care professional who provides basic and emergency health care services to women and their new-borns during pregnancy, childbirth and the postpartum period.

9) **Postnatal care for mothers and babies**: percentage of mothers and babies who received postnatal care visit within two days of childbirth.

10) **Exclusive breastfeeding for 6 months**: percentage of infants aged 0–5 months who are exclusively breastfed.

11) **DTP3 vaccination**: percentage of infants aged 12–23 months who received three doses of the combined diphtheria, pertussis and tetanus vaccine.

12) **Antibiotic treatment for pneumonia**: percentage of children aged 0–59 months with suspected pneumonia receiving antibiotics.

- **PROGRESS** indicators:

1) **Place of residence**: The place of residence refers to the civil subdivision of a country (district, county, municipality, province, department, or state) in which the individual resides. Disaggregation levels: rural/urban.

2) **Ethnicity** refers to groups of people whose members identify with each other through a common heritage, often consisting of a common language, a common culture (often including a shared religion) and/or an ideology that stresses common ancestry or endogamy). Disaggregation levels: majority/minority.

3) **Occupation** (not included in the UNICEF modified surveys): any activity on which time is spent by a person. Disaggregation levels: unskilled/skilled/professional.

4) **Gender** is a range of characteristics used to distinguish between male and female. Disaggregation levels: male/female.

5) **Religion** is a collection of cultural systems, belief systems, and world views that establishes symbols that relate humanity to spirituality and, sometimes, to moral values. Disaggregation levels: predominant/minor.

6) **Education level of the household**. Disaggregation levels: none, primary, secondary, higher.

7) **Social capital** (not included in the UNICEF modified survey): focuses on social relations that have productive benefits. Disaggregation levels: number of community organisations advocating for community improvements in health housing water and health care quality/other community organisations.

8) **Socio-economic status**: an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others. The Household Wealth Index (HWI) has been used as a proxy for socio-economic status. The HWI is divided into quintiles and is estimated from several household characteristics and asset variables using a principle component analysis. Disaggregation levels: lowest/second/middle/fourth/highest.

Inequalities were estimated by associating each MASCOT indicator with all categories of the PROGRESS indicators.

Chi2 was used to assess the association among variables and odds ratios, with 95% confidence intervals. Test of homogeneity among odds ratios were performed to evaluate the null hypothesis of no inequality. Linear trend was tested when PROGRESS indicator had more than 2 categories, and heterogeneity of odds ratios was statistically significant.

UNICEF data were considered for five countries involved in the project: Ghana, Guinea-Bissau, Mozambique, Malawi, and Bolivia.

For Costa Rica, given the absence of a DHS or UNICEF survey has forced the effort of collecting data from different sources of information. The indicators that had valuable information to be informed where related with adolescent pregnancy, contraceptive use and skilled birth attendance. The under-five mortality ratio was estimated for the general population. The data necessary to determine the indicators required the use of different data sources (register, census and surveys) from different years. The MASCOT partners combined 6 sources of raw data to estimate the different indicators. We used at least two measurements from different years. Besides, we executed appropriate statistical analysis to compare our data with the Costa Rica UNICEF 2011 survey. Dataset used for the first time point:

- ✓ National Census 2000.
- ✓ National HOUSEHOLD survey 1999, 2000.
- ✓ National Nutrition surveys 1996, 2009.
- ✓ National school children 6-8 years old height census 1997.
- ✓ Reproductive Health national survey 2009.
- ✓ National registry of health care and vital statistics all years between 1996 and 2010.

Data retrieval

IHCAI has implemented the retrieval of information on health inequalities and social determinants from all participating countries.

European data

HAPI has been responsible for the European mapping of current status of maternal and child health inequalities. During the workshop and 6-month consortium meeting held in Costa Rica, the European regional report was adjusted to reflect better ways for the European contribution to share learning from experiences on reducing MCH inequalities. In accordance with this decision, HAPI put together the links to data from Eurostat and other sources and sent them to IHCAI for potential inclusion in the database. However, given the amount of data and methodological complexity to perform analysis and comparison given varying sources, systems of data collection and years covering the data, it was decided that existing resources analysing MCH and MCH inequalities would be summarised and linked as much as possible to the indicators proposed in WP2.

In order to identify other sources and potential cases for inclusion in the European report HAPI also had exchanges with colleagues from WHO, EuroHealthNet and the Spanish Health Ministry.

Task 2.3 Synthesis and analysis of the collected data

African and Latin American reports

The data published by IHCAI on the MASCOT database was used to complete the national reports.
Data analysis has been done following a number of consecutive stages:

1) Systematic search of all possible combination of maternal child and adolescent health indicators by categories of PROGRESS indicators in different sources of information.

2) Analysis of search results.
3) Feasibility assessment based on search results.
4) Content analysis of surveys conducted by UNICEF
5) Reformulation of MASCOT and progress indicators.
6) Definition of algorithm for generation of redefined MASCOT and PROGRES indicators based on contents of UNICEF and DHS surveys
7) Data analysis of UNICEF surveys for selected countries generating by analysis Log's using STATA 12.1 software

IHCAI and UCSC built a guideline to help local experts in the analysis of inequalities in their country. Based on the reports established by each local country experts, regional reports were prepared for each region: UCSC was responsible for Latin America and UHFH for Africa.

European report

When looking at the situation in Europe, the report considered identifying some of the issues that WP2, WP3, and WP4 intended to address including:

1) What is the status of MCH inequalities?
- There was a possibility to consider determinants of health inequalities according to PROGRESS+ (Place of residence, Race/Ethinicity, Occupation, Gender, Religion, Education, Social capital, Socio-Economic Status + Age, Disability and Sexual orientation).
- There was no consensus on the approach to take on whether countries were analysing inequalities according to those that are worst off, in terms of the gap or across the gradient. The European report made the case for analysing across the gradient.

2) Who are the key stakeholders conducting research in MCH inequalities?
3) What are the structure, function and relation with the research for health system with regard to MCH inequalities?
4) What are the most important policies/programmes?
5) What are the institutions responsible for designing and implementing these policies/programmes?

Compared with other regions in the MASCOT project, the report for Europe is not based on assessment of results from national reports on MCH inequalities and did not use the method of data collection and analysis from WP2, as explained in the previous section. For this reason the report includes a section on how indicators on MCH and MCH inequalities are captured and standardised in the European region. As much as possible the indicators in the report attempted to capture the ones proposed by WP2 on MCH and the determinants for the PROGRESS categories (Place of residence, Race/Ethnicity, Occupation, Gender, Religion, Education Socio-economic status and Socio capital). Information systems at the regional level do not disaggregate data into all these categories, so instead some proxy indicators were used in the study.

Moreover, given the relevance and investment of European institutions in collecting evidence on effectiveness of policies and programmes in this area, the report also includes a summary of all recommended actions to reduce MCH inequalities specifically in reducing infant mortality.

The data presented in the report was gathered from the most up to date reports on international and multilateral organisations on MCH and MCH inequalities. Those that look at Europe however, accounted for different countries within the region (e.g. EU Public health programme countries[2],

[2] EU 27 member states (http://europa.eu/about-eu/countries/index_en.htm) and Iceland, Liechtenstein, Norway and Croatia

WHO European Region countries[3]). Some reports focused exclusively on identifying and assessing maternal health and/or child health indicators. Those that attempt to address MCH and HI within the region did so generally within the context of monitoring progress toward the achievements of the Millennium Development Goals (MDGs). The report, however, is limited in that consulted reports generally presented regional and national averages, which are known to hide inequities. Consequently, some socio-economic determinants of HI between and within European countries are identified, but the report of the European region presents an overview of MCH and MCH inequalities, as well as key recommendations, which have been summarised from existing work at the European level.

Major results and achievements and major failures

The analysis of the status of MCH inequality provided the extent to which the health status of various groups differed, as well as the odds of belonging to one group compared to another. The MASCOT study has established evidence on the existence of inequalities in accessing maternal and child health (MCH) services in all African countries reviewed.

The European mapping report provides an overview of the status of MCH and MCHI, which suggests there are inequalities within and between countries, but also that generally Europe as a region is better off than the other MASCOT regions. Although we agreed with the principle to prioritise resources for research in the other two regions, in retrospect, we would have supported more work in the areas covered by WP3 and WP4 in efforts to assess the actions and strategies which can explain Europe's more favourable situation. The latter would have provided more support to the North-South knowledge transfer and collaboration, which was central to the MASCOT project. The analysis showed partial results related to each country. This limited the availability to be cross tabulated the health indicators with all PROGRESS indicators. In Latin America, the distribution of the selected health indicators presents similarities, particularly for the PROGRESS indicators Place of Residence, Education and Gender. Other PROGRESS indicators such as Religion, Ethnicity and Socioeconomic Status were only partially reported. Depth analysis is needed for identifying changes in the gradient of inequalities which is an essential component for measuring the effect of the interventions in reduction of inequalities. Sometimes it was complicating to compare Health and PROGRESS indicators between countries because not all collected data were from the same year. Compared with African and Latin American regions in the MASCOT project, the report for Europe is not based on assessment of results from national reports on MCH and it did not use the method of data collection and analysis from MASCOT Guidelines. Even if the data has been compiled from different sources and is illustrative of differences between Countries and regional trends in MCH related indicators, results are not directly comparable.

WP3: Mapping of national health research systems and their role in maternal and child health research

General objective

WP3 aimed to map national health research systems (NHRS), their capacity and needs in order to understand the context in which research dedicated to MCH takes place in each selected country.

[3] Total of 53 countries available at http://www.euro.who.int/en/where-we-work

Progress toward objectives and details for each task

Following the methodological guideline developed in WP1, local country experts have described the way the research for health system is structured in each participating country and the interactions it has. Three different components of the research for health system have been considered:

1. the structures and mechanisms governing, managing and financing research for health
2. the national capacities allowing health research implementation
3. the national indexes evaluating health research performance

The methodology has been similar for studying each of these components. This included a desk review of information publicly available followed by interviews of key informants to collect the missing data and for clarifications.

T3.1. Mapping of the health research governance structure and research capacity

Governance and management of research for health

To identify the structures and governing mechanisms, managing and financing for research for health, experts took into consideration:

- governmental bodies and agencies dealing with research for health
- agencies financing research for health in the country
- national programmes financing research for health

Research for health capacities

To identify the national capacities for research for health and more specifically for MCH research, experts have established:

- a snapshot of national research institutions
- the capacity building mechanisms
- the national cooperation

In addition to the common methodology, a sound bibliographical search contributed to identify in each country, the top ten research institutions producing scientific research papers dealing with MCH in general and specifically MCH inequalities.

T3.2. Evaluation of the health research performance

To evaluate the performance of the national research for health system, experts have listed the funded projects, publications, patents, conferences/workshops, ethical reviews, and staff involved in each country. Based on these data, they analysed the innovation potential, the knowledge transfer, the quality evaluation, the ethical review, and the overall research for health in the country.

T3.3. Identification of research needs

The information collected in relation to National Research for Health Systems was presented and synthesized in the corresponding session of the national reports. A deeper analysis allowed concluding on the national strengths, challenges, gaps, overlaps and needs.

The online database has also been completed by each expert allowing to take this valuable information into consideration for the development of the decision-making tool in WP5 since governance, management, financing and related issues are important aspects as to understand the general context research on MCH is being performed in a given country.

Major findings were extracted from the national reports to present an overview at the regional level.

Based on the assessment of national results, two regional reports were integrated, one for Africa and one for Latin America. As presented above the European report took into consideration the most up to date reports established by other organisation and is therefore presenting global trends (D3.3).

Major results and achievements and major failures

The major result of this WP was the mapping and presentation, through regional reports and country reports, the available information regarding the National Health Research systems in the subject countries and regions. Besides, the identification of active research teams in MCH were identified. All of this is key data, both in support of the MASCOT project as a whole, but also for those government officials working.

The political unrest on Guinea Bissau was a major obstacle in successfully completing the country report in that instance. This had knock on effects for the rest of the project, meaning in the end a strategy brief could not be completed, and thus the possibility for co-operation activities involving Guinea Bissau was also limited.
Major challenge: Information on the national health research system is scattered across various institutions of health. Gathering information of MCH research hence was not exhaustive within the given time frame. The analysis therefore is not an absolute representation of facts.

The national research for health systems were mapped in the different MASCOT countries except for Guinea Bissau

WP4: Impact of MCH research on the development of national policies and strategies addressing health inequalities

General objective

WP4 aimed to identify interventions implemented in participating countries for tackling MCH inequalities, and to evaluate the use and degree of impact of MCH research findings in the development of remediation strategies (policies and programmes) by governments.

Progress toward objectives and details for each task

T4.1. Mapping of remediation strategies and policies for MCH inequalities

Strategies in Africa and Latin America

A set of four different tools developed by partner 5 (INSP) were applied by each country expert to identify in the first step, the most relevant policies and programmes implemented to tackle MCH inequalities and in the second step, the level and characteristics of scientific research products utilization in the formulation and implementation of these strategies:

- Tool A: Online survey on intended and unintended research project impacts and influence on mechanisms and policies. The survey was made available at the following URL during the months in which it was carried out: http://ciss.690712.com/survey/index.php?sid=27241&newtest=Y
- Tool B: Content analysis of research use in MCH policy and programmes.
- Tool C: MCH research uptake mechanisms in the setting-up of policies and programmes.
- Tool D: Content analysis of national and international MCH publications in peer-reviewed journals.

Concretely the objective was to:

- map the most relevant MCH research in the country,

- map and analyse the most important policies and/or programmes tackling MCH inequalities,
- identify the eventual use of MCH research as reference material for policy shaping,
- analyse the relationship and the gaps between MCH research production and policy.

Using the methodology developed in WP1, local experts invited the most important MCH institutions and researchers identified in WP3 to participate in an online survey (Tool A). Key decision-makers working on given policies and programmes were also interviewed on the importance and type of use of research evidence in the design, implementation, evaluation and scale up of the identified related strategies. This was further enriched by a collection and analysis of relevant literature and documents.

Using the bibliographical search that supported WP3, it allowed in WP4 to identify in each country, the top ten research institutions producing scientific research papers dealing with MCH in general and specifically MCH inequalities.

A general glossary and three specific handbooks were developed by INSP in WP1 to answer any question the country experts might have had about the application of the tools. Online support was available during the process.

All country experts carried out the survey, submitted their results and used them as the basis for writing the corresponding section of their country reports. The MASCOT online database was also completed with the registry of strategies and policies aimed at tackling MCH inequalities in each country (D4.1).

Strategies in Europe

In addition to the document putting together European resources and programmes on MCH inequalities, HAPI organised two further meetings with Sue Graves, from the Department of Health, and Marilena Korkodilos, who coordinated the work of the National Support Teams (NST) in the UK, to identify some examples of policies or programmes which have shown results. Through these exchanges, the following potential cases for inclusion have been highlighted:

- Public Service Agreement (PSA) target on reducing health inequalities by 10% in infant mortality and the work of the National Support Teams (NST) to achieve this target.
- How the UK tried to match MCH indicators with the SDH?
- Data collection, its importance and what data to collect to design appropriate programmes that address health inequalities. In the UK, individual child health report cards (known as "Red book") include a large amount of data, but they are not utilised and registered to make comparisons across the population.

T4.2. Assessment of the use of institutional MCH research in health and health research governance.

It was initially agreed to focus on all kinds of research actually used and having impacted the formulation and development of the different strategies tackling MCH inequalities that were identified in each country without further distinction between nationally or internationally produced health research. Instead, following the methodological discussions during the consortium workshop in San José, Costa Rica in March 2012, the effort of all partners and country experts was directed towards the identification of three types of research results utilization in the different strategies identified and analysed[4]:

[4] Hanney, S. R., Gonzalez- Block, M. A., Buxton, M. J. & Kogan, M., 2003. The utilisation of health research in policy-making: concepts, example and methods of assessment. Health Research Policy and Systems, pp. 1-28.; Lavis, J. N., Ross, S. E., Hurley, J. E. & Al., E., 2002. Examining the Role of Health Services Research in Public Policymaking. Milbank Quarterly,

a. Instrumental utilization, understood as the direct use of research as technical support for the elaboration of policies and programmes tackling MCH inequalities.
b. Conceptual utilization occurs when references to research results are used to give a general framework to the specific policies and programmes identified and analysed for each country.
c. Symbolic utilization of national or international scientific articles occurs when references to literature are neither directly supporting nor serving as a general theoretical framework in the formulation of the policies and programmes tackling MCH inequalities. In this case research results are only used to symbolically support them.

Major findings extracted from the national reports were summarised in the corresponding section of the regional reports established for Africa and Latin American (D4.3).

The African, Latin American and European reports were presented during the consortium meeting in Johannesburg (South Africa) in October 2012. Discussions following the presentation of the European regional report mentioned the possibility to identify case studies to be included in the successful strategies section (WP5). The rationale was to provide with more concrete transferable learning in terms of what has worked in Europe to reduce MCHI, beyond the presentation of the status of MCH and its determinants. However, a different strategy was agreed to ensure the project captured learning from Europe in this area, which is described below as part of WP5.

Major results and achievements and major failures

The most important products of this WP are the list of different strategies tackling MCH inequalities in the study countries together with the identification and analysis of the kind of use of research results they incorporate in their design, implementation and/or evaluations.

The political problems in Guinea Bissau were a major obstacle to the conclusion of this WP in this country. On the other hand, the difficulties encountered in a couple of other countries to have researchers participate in the online survey were quite satisfactorily solved with the use of email, telephone calls and a Word format version of the survey. So, in the end, besides the lack of information for Guinea Bissau, the most relevant data was satisfactorily obtained for the other 11 countries in the study.

Information on the national health research system is scattered across various institutions of health. Gathering information of MCH research hence was not exhaustive within the given time frame. The analysis therefore is not an absolute representation of facts.

WP5: Identification of best practices through an overall analysis

General objective

WP5 consisted to analyse the data collected in previous WPs with the aim of determining the most relevant strategies to remedy MCH inequalities, and of providing recommendations directed to countries for potential implementation in other settings.

T5.1. Database constitution and support tool for decision-making

The first step of the MASCOT Data Resource project consisted in creating a centralized searchable database for all information required by experts to perform a comprehensive analysis of each country's health and inequity indicators, health research system information and MCH projects carried out by the countries. IHCAI was responsible for the development of this tool.

Vol. 80, No. 1: 125-54; Weiss, C. H., 1979. The many meanings of research utilization. *Public Adminsitration Review*, pp. 427 – 433.

Now that the database contains all data from Work Package 2, Work Package 3 and Work Package 4, an application is needed to allow users to perform analysis over that data, a tool to be able to maintain the data and a tool to provide users with the unprocessed data in case they need them for their own analysis. The best way to provide data to users would be through a customized application. Fortunately, UNICEF has been working on a specialized application to manage and provide information on Millennium Development Goals (MDGs)
All data from WP1, WP2 and WP3 is now stored in 45 tables. Dynamic Reports come from a Business Intelligence Application, which has been available to users in the database site: www.ihcaimascot.org

Also, with the tool, a powerful analysis can be performed on the data and once future data will be entered into the application, even more complex analysis can be implemented. The tool provides all the instruments necessary to dynamically create:

- Data Charts
- Geo
- Dossier
- Key Performance Indicators (KPIs)
- Interactive Dashboards
- Real-time Business Intelligence (BI)

Business Intelligence Tool

It was necessary to include an existing Business Intelligence (BI) solution to the project's overall infrastructure. The tool usability met the expectations along with a moderate installation in case a server migration needs to be done. It also provided some packages for running the application on the Cloud in case the demand for the application extends too much the requirements of the current hardware infrastructure. This provides the ability to include additional functionalities by attaching or developing application modules to the core engine. Initially, it will be installed with 3 modules: Reporting, OnLine Analytical Processing (OLAP) for data cubes in case they are required and Charts. DevInfo was selected as the ideal candidate for the MASCOT project, providing:

- **Usability:**

The tool usability met the expectations along with a moderate installation in case a server migration needs to be done. It also provided the option to have all the data integrated to UNICEF repositories in case the demand surpasses our hosting capabilities.

- **Data handling:**

Besides being able to connect to our Data Storage, DevInfo user can submit their own data in case users want to perform some cross-source analysis.

- **UNICEF Support.**

DevInfo was endorsed by the United Nations Development Group (UNDG) to assist countries in monitoring achievement of the Millennium Development Goals (MDGs). The DevInfo initiative originated as ChildInfo and is managed by UNICEF on behalf of, and with support from, 20 member agencies of the UNDG. Because of this, it counts with a solid support which got version 7.0 just released and with plans for a new version in the near future.

- **Application Requirements.**

- Operating system: Windows Server 2003/XP Professional or above
- Software: Microsoft.NET Framework 4.0 and Web Server IIS 6.0 or above
- Database: Microsoft SQL Server/Express 2005 or above
- Browser: Internet Explorer, Mozilla Firefox, Safari, Google Chrome

- **Price.**

DevInfo runs as a Free and Open Source application which brought lower costs to the MASCOT project. The application ran using the "Running as a Server" package (installing the application into our own servers) initially to reduce costs, but if it scales to lots of users and it starts impacting the performance, a migration is available to UNICEF Servers.

The overall solution

Database structure has been completed and the Import Tool is now loading most of the data into the database. With this, MASCOT has achieved to get a filtered, centralized data repository.

Other tools

Two other tools are being custom developed to achieve data maintenance and provide the unprocessed data to users. These include:

- *Quality Assurance Data Tool (QA Data Tool)*

During the application's Data Loading Phase, reports are created in the database to display the status of "missing data". QA Data Tool also provides a way to make data checks in the application to validate data, directly in the database.

- *MASCOT Raw Data Provider*

The application was supported by a secondary tool that provided end-users with a way to request the unprocessed data. The Raw Data Application was a website that provided users with the opportunity to register and request access to MASCOT Raw Files for their own personal analysis or other objectives they specify.

Users had to complete a workflow:

- All available files are displayed to the user.
- User chooses which files he/she needs.
- User is taken to a form in which he/she submits his/her contact information and the purpose of his/her research.
- If the request gets approved by an administrator, a link is delivered to the requestor to download the files. This link has a configurable expiration time.

T5.2. Comparative analysis between countries and identification of best practices

Two different approaches have been chosen in order to identify the successful strategies that could be set up in other countries and conditions:

1) Extraction of a catalogue of successful strategies from national reports

The national reports prepared in WP4 were dissected by partner 9 (NIMR) to extract the strategies that have revealed an interesting potential in tackling MCH inequalities at national level. The different features of these strategies were also collected and their transferability in other settings analysed. Results are presented as a catalogue of successful strategies in the format of a table describing the characteristics and transferability criteria for each strategy of each country (D5.3).

2) Systematic review of the literature on the effectiveness of health system and complex interventions to reduce inequities in MCH

- *General description*

CHP developed an appropriate systematic review protocol and supervised the search. The review was organised as a two-stage process, which is described as part of the protocol:

- the first stage involved the screening of titles and abstracts from all relevant literature found in the database searches

- the second one uses full text articles to map interventions according to a set of defined variables.

More than five training sessions have been organised through a conference platform in order to familiarise the partners involved in the activity. Representatives from COHRED, HAPI, IHCAI, INSP, UCSC, SPH, CPH, UHFH have participated in different stages of this protocol.

The search for relevant literature has now been completed and references uploaded into a database on the EPPI-reviewer web-based software.

The review protocol that has been developed has been registered with international systematic review registries.

- *Role in strengthening the North-South collaboration*

One important discussion among the MASCOT partners has been to identify a way to strengthen the "North-South" collaboration aspect of the project. HAPI took the lead in this work as it felt the European report provided information in terms of an improved status of MCH in the region as compared to others, and identified determinants of inequalities between and within countries. However, the report did not capture transferable learning in terms of what European countries have done to achieve these results. Therefore, it was decided to **add the experience from the North as part of the systematic review**.

Instead of developing a parallel process of the review to the one taking place on literature from LMIC, it was decided to wait until the finalisation of Stage 1 and try to fill a gap identified in existing literature. In this review, the focus is on High Income Countries (HIC) contributions to community-based interventions, as a way to understand how HICs have been tackling MCH issues directly through out of hospital/clinic interventions.

The research protocol for this review was a simplified version of the LMIC systematic review protocol. The specific objectives we set out were to (i) identify the literature on community-based interventions on maternal health in HICs; and (ii) conceptually map the literature according to country focus, topics addressed, nature of the intervention and the intervention provider, and interventions designed to address inequalities in maternal health.

Following systematic review methodology, publications were selected for full text review if they were either Randomised Control Trials (RCT) or Systematic reviews (SR) since these methodologies produce more robust results than descriptive studies. After single screening on title and abstract, data from the full text was extracted according to the same generic codes developed by the LMIC systematic review team to ensure the studies from HIC literature could be classified similarly. In addition, a set of specific codes were added for HIC literature on the type of community-setting where the intervention was delivered and on who the intervention provider was.

A total of 7178 documents were obtained from the literature search, from which 119 publications were selected for inclusion. These studies have been added to the webdatabase, which includes all the literature included and coded from both the LMIC and HIC reviews. Additionally scoping paper was written with the results of this review and it has been submitted together with other papers from the review results to the journal "Globalization & Health" for the series on maternal health.

T5.3. Preparation of policy advice based on the identified best practices

Based on the preliminary results obtained with the catalogue of successful strategies and the systematic review, a policy-development workshop was organised in Dar es Salaam (Tanzania) in March 2013. This 2-day event gathered MASCOT partners and external participants specifically involved in the policy-development aspect. The major objective of the workshop in addition to stimulate the multilateral collaboration consisted in providing recommendations to countries for implementing efficient strategies to tackle MCH inequalities. About 20 participants from the MASCOT project have been joined by ten or so participants from the Tanzanian ministry of health, Tanzanian universities, NGOs, and international organisations. The resulted recommendations are summarized in the report submitted as deliverable D5.4. The difficulties met to compare the strategies from different countries and to associate policy-makers to the meeting first limited the recommendations and their impact and led the consortium members to agree on a reorganisation of WP6. More details will be provided in the section dedicated to this WP.

A web database with full public access has been prepared, with no password required to access the database. The web address is: http://eppi.ioe.ac.uk/webdatabases4/Intro.aspx?ID=11. Full instructions on how to search and make reports on that database are on the website.

A policy brief of the findings of this WP were developed and disseminated widely in South Africa.

Major results and achievements and major failures

A major achievement to highlight for the systematic review of LMIC literature was the integration of the Mascot team with teams from other projects which participated in the review. A total of 33 people over 4 continents) actively participated in the review. This was 18 months of work. The capacity of the team to perform reviews in future was markedly enhanced, we all learnt from this work, and will apply such lessons in future. As a major achievement, the review is being used to inform global policy on health promotion in maternal health settings. WHO is preparing guidelines on that topic, and drawing on the articles coded for particular conditions in that data. For example, the Mascot/Wotro review identified articles on maternal waiting home interventions. These articles are then used to inform the decision about whether WHO recommends the use of waiting homes as a strategy to improve maternal health. Such recommendations will have a major impact on the health policy in LMICs.

No major failures occurred in this work, but some challenges should be highlighted. Firstly, outputs of this work were delayed due to the need for doing extensive quality assurance checks. Having a large team meant real collaboration between all partners, which promoted the central aim of the project (collaboration between partners and Africa and Latin American partners). But having such large teams makes it hard to standardize methods and definitions across the project. The second challenge lay in doing a search that captured all articles on maternal health. The search the team did elicited nearly 46,000 hits, which is at the limit of what is possible for a review team to tackle.

Nevertheless it appears that there were many important references missed in this search. The final challenge lay in completing the journal articles from this work before the end of the project. One article has been submitted to date and several others have been drafted for submission shortly. Overall, to have completed the truly massive review, and presented its findings at important national and international meeting was a major achievement in itself.

The addition of HIC literature on community-based interventions to the LMIC repository was an important way to bring more learning from the North. The HIC review identified and mapped the interventions and these are included in the webdatabase enabling further analysis and comparison in terms of effectiveness towards designing programmes and strategies.

The webdatabase is one of the core outputs of the MASCOT project. It is a unique database with research on maternal health in low- middle- and high-income countries. Topics examine different areas including health systems interventions; interventions in community settings; health promotion interventions; and interventions on 5 tracer clinical conditions, namely antepartum and postpartum haemorrhage, HIV and other STIs, hypertension and malaria. This resource has a significant role in building research capacity and contributing towards gathering evidence for policy making and programme implementation. It allows identifying and analysing studies to extract best and promising practices to improve maternal health.
A catalogue of successful strategies (D5.3) has been extracted from the national reports and some recommendations directed to countries (D5.4) have been provided after the policy workshop in Tanzania. A report and a catalogue of best practices were prepared and submitted to the MASCOT project overall coordinator. In addition, a policy development workshop was organised and convened in Dare es Salaam Tanzania and it involved all consortium members and policy makers.

In addition, a searchable database (D5.1) has been built to gather all the project data and ensure an efficient treatment. This constitutes the basis for the development of the decision-making tool (D5.2) intending to support governments in their strategic orientation.

Some of the information required stable internet connectivity. The WP coordinator (NIMR) experienced this problem not only in implementing this WP but also in contributing in other WPs. The other challenge faced was lack of clarity between the WP5 and WP6. Initially, the tasks of the two WPs were overlapping. This made researchers confuse which task belonged to what WP.

WP6: Development of country-specific strategies

General objective

WP6 aimed to answer the specific country needs in terms of reducing MCH inequalities by and implementing collaborations between countries with similarities and complementarities.

Progress toward objectives and details for each task

Given that Ghana is implementing the community-based health planning services (CHPS) that places community health nurse officers to provide door-to-door services, this strategy was identified in Ghana as a possible channel through which maternity waiting homes could be created and used to improve delivery outcomes in such remote communities since referrals could then be made quickly from the CHPS to the nearest health facility equipped to manage pregnancy related complications.

T6.1. Development of cooperation tools (Strategy Briefs)

Following the discussion held during the consortium meeting in Johannesburg in October 2012, the consortium partners agreed on a substantial modification of WP6 that included the design of collaboration guiding documents called Strategy Briefs. These documents are based on the National Reports and the catalogue produced in WP5. Partners 1 and 5 (COHRED and INSP) developed a template to be used as a communication support to present the mapping results of WP2, WP3 and WP4, focusing on the successful strategies to potential stakeholders. A handy easy to download from MASCOT's website two-page format was developed to describe the reported national level

strategies that have proved to be efficient tackling MCH inequalities. Each partner and/or country expert worked on the preparation of draft versions of the Strategy Briefs with particular support from INSP, COHRED and IHCAI. Partner 3, SPI, was responsible of the graphic design and preparation of the final Strategy Briefs. These Strategy Briefs are available and downloadable at: http://www.mascotfp7.eu/es/mascot-resources/strategy-briefs/.

The Guatemala team chose Costa Rica's *Hospital without Walls* judging it to be an example of good practice in enhancing primary care in hard-to-reach communities through decentralisation and community empowerment. Mario Tristan and Cinthya Agüero from IHCAI prepared a set of documents describing the initiative on the effects of the intervention in Costa Rica. These documents were distributed and discussed with the HAPY team leaded by Martha Perry and the Guatemala experts. This preparation paved the road for better understating the Guatemala perspective and prepared the Costa Rica participants including the Minister of Health of Costa Rica Dr. Daysi Corrales.

SPI provided extensive support on the development of the Strategy Briefs namely the design development which took several time to complete to ensure that each document (11 in total) clearly represented in an attractive manner the scientific contents. Within this task SPI also developed in conjunction with UCSC the "Planning and Evaluation Tool" a document providing strategic and operational guidance on the implementation of the collaboration activities.

The present document therefore entailed the description of the collaboration activities to implement until the end of the MASCOT project in March 2014 – referred here as a "planning and evaluation tool". This document reflected that discussion by structuring the major concerns and opportunities and laying out a plan of activities that is realistic and feasible under the existing constrains. Such plan of activities – "planning and evaluation tool" – provided the general framework under which the collaboration activities should work and its expected outcomes during the project duration.
The planning and evaluation tool therefore intended to support in the most efficient and effective way both situations by providing an overall framework for the activities to implement.

T6.2. Cooperation activities

The event was held on February 3rd–5th 2014, and brought together a range of health professionals: from Guatemala, these included some of the main actors from the Ministry of Public Health and Social Welfare (MSPAS) and from the Faculty of Health Science at San Carlos University (USAC). From Costa Rica there were the Minister and Deputy Minister of Health, and some of the country's promoters and managers of primary health care who took part in the development of Hospital without Walls. Representing MASCOT, Dr. Mario Tristán of the International Health Central American Institute Foundation (IHCAI, Costa Rica), who facilitated and chaired the meeting, while Martha Perry from Health Action Partnership International (HAPI, United Kingdom) was responsible for coordination. Furthermore, two field visits took place , to San Ramón and Palmares , where the initiative Hospital without Walls was carried out.

6.2.1 Cooperation framework

As a key part of WP6 cooperation activities, the MASCOT project was responsible to provide the context and framework for the cooperation; and to facilitate and finance the first in-person exchange between countries in order to give stakeholders the chance to meet, exchange information on their respective countries and health systems, and establish a longer-term collaboration relation outside the context of MASCOT to help with the transfer process.

The programmes were designed around objectives which included to:

1. Learn about MCH situation in the country and need for the strategy
2. Share expectations from the exchange and questions to address
3. Learn about the chosen strategy from the key stakeholders in the host country, including site visits
4. Foster a dialogue to extract lessons learned on the opportunities and challenges, and begin to explore a plan to transfer learning between countries.

A series of questions were also identified to guide the transferability process, that is, to think and keep in mind during the exchange and learning from the country's experience implementing the strategy. These included:

- What is essential and what is not in your setting?
- What are the priorities and should be done first, and what should follow?
- What can be achieved in the short term and what can only be achieved over the longer term?
- What is feasible and what is not given the capacity and resources available? What other capacity and resources need to be envisaged?

In order to assist the country's to frame the transferability process into a concrete plan with practical steps, the framework also included a template plan of action.

6.2.2 Collaborative teams

MASCOT implemented two cooperation activities through two collaborative teams: Ghana & Mozambique and Costa Rica & Guatemala. During the review of planned activities for WP6 at the MASCOT Consortium meeting in September 2013, it was decided to focus collaboration activities between two MASCOT partners, Ghana and Mozambique, who had already started a dialogue to transfer the "Maternity Waiting Homes" model of Mozambique to Ghana. The second collaboration would be with a country outside of MASCOT with worse MCH indicators.

Together with the Project Coordinator at COHRED, potential countries were identified. They included Guatemala, Haiti, Honduras and El Salvador in Latin America; and in Africa, Burkina Faso, Liberia and Sierra Leone. With assistance from Consortium and Advisory Board members, different stakeholders in these countries were identified and invited to attend the partnering event in Mexico in September 2013, which would be a way to present project results and engage stakeholders in a collaboration process. The only stakeholders who were able to attend were those from Guatemala, who from the beginning showed significant interest in engaging in such a collaboration as a way to helo address some of the country's challenges around MCH. Following different exchanges and dialogues on their priorities, Costa Rica's experience with the "Hospital Without Walls" was chosen.

6.2.3 Cooperation activities

Collaborative team 1: Ghana & Mozambique on "Maternity Waiting Homes"

Ghana chose Maternity Waiting Homes (MWH) as a strategy to contribute to the reduction of maternal and perinatal mortality and morbidity and to address some of the challenges from their own experience with MWH. A MWH is a facility built near a health centre or hospital for women to stay before going into labour. They allow all women the same access to quality and in-time basic and emergency obstetric care services.

In Mozambique, MWH were introduced in 2009 and since 2012 it is a government policy to build a MWH attached to every new Health Centre (type I and type II). MWH are considered low cost interventions when compared to their effectiveness.

They allow women in remote areas or with difficult access to wait during their last days of pregnancy in a facility close to a health centre and hospital where they can deliver. Mozambique has been successful with MWH to increase skilled birth attendance and contribute to reduce maternal and newborn mortality.

The collaboration and exchange with Mozambique was a way to explore how the MWH model is implemented, what are the differences and how they have addressed the challenges faced by Ghana.

The meeting between Ghana and Mozambique took place in February 19-21, 2014, in Maputo, Mozambique.[5] It brought together a key team of experts from the Ministry of Health in Mozambique working in the areas of maternal and child health. The Deputy Director of Public Health, leads this team. Dr. Fatima Cuembelo from the Faculty of medicine of Eduardo Mondlane University, who was the MASCOT country lead from Mozambique, acted as the principal liaison. From Ghana, participants included a representative from policy, Dr. Gladys Brew of the Family Health Directorate at the Ghana Health Service, an interdisciplinary team from Bosome-Freho District formed by the Director of Health Services, the Chief of the community and a midwife. They were supported by the MASCOT partner in Ghana, School of Public Health. The meeting was coordinated by HAPI, lead of these activities on behalf of the MASCOT project.

In addition to having time for presentations on each country's MCH, health system and experience with MWH, a day of site visits was organised to two MWH in Manhiça district. To further strengthen the collaboration efforts between Ghana and Mozambique, an institutionally-appropriate protocol for collaborating with the Mozambique Ministry of Health was outlined to serve as a guide for the Ghana Stakeholders. The first line of contact will be the National Directorate of Planning and Cooperation (NDPC) responsible for approving intent for collaboration. The NDPC will identify the right institutions that can better collaborate on the MWH and a memorandum of understanding will be drafted to guide the transfer process.

Collaborative team 2: Costa Rica & Guatemala on "Hospital without Walls"

Guatemala selected to learn about the "Hospital without Walls" initiative implemented in Costa Rica as a strategy to contribute to the reduction of maternal and child mortality and chronic malnutrition and to address the problem of access to care to indigenous populations and those living in rural and remote areas. The HsP was an integrated health care strategy based on the provision of prevention, promotion and care with a focus on giving access and empowering rural communities.

HsP started in the 1950s thanks to the vision and commitment of Dr. Juan Guillermo Ortiz Guier at Palmares health centre and extended to reach the cantons of Naranjo and Valverde Vega. His vision was to move away from the traditional system of the enclosed hospital ("with walls") to another, more open system with active participation of the communities. In comparison to the rest of the country, the area served by the HsP infant mortality dropped sharply and they were able to do it with a more efficient use of resources. HsP was successful because it implemented a number of innovative strategies, which aimed to increase participation and decentralise human and material resources.

[5] Because of logistics issues with transit visas for the Ghana team in South Africa, the meeting start was delayed by one day.

The programmes provided home visits and access to specialised health workers giving poor and low-educated mothers knowledge about causes of diseases and their prevention, better control of infections through sanitation and immunisation programmes, and increased antenatal and postnatal care coverage.

The meeting of this collaborative team was held on February 3rd–5th 2014, in San Jose, Costa Rica. It brought together a range of health professionals: from Guatemala, these included some of the main actors from the Ministry of Public Health and Social Welfare (MSPAS) and from the Faculty of Health Science at San Carlos University (USAC). From Costa Rica: the Minister and Deputy Minister of Health, and some of the country's promoters and managers of primary health care who took part in the development of HsP. Representing MASCOT, Dr. Mario Tristán of IHCAI (Costa Rica), who facilitated and chaired the meeting, while Martha Perry from HAPI (United Kingdom) was responsible for coordination. Furthermore, two field visits took place, to San Ramón and Palmares, where the initiative HsP was carried out.
Guatemala's current health system features some of the elements that had been strategic for HsP, such as health posts, home visits and basic health teams. The meeting was an opportunity to analyse, which other elements of HsP could improve and add value to the current system. During the exchange, the first steps were taken to draw up an action plan concerning the areas that can be reviewed and improved in Guatemala; for instance, carrying out an analysis of health and governance and fostering the participation of the technical, municipal and local levels to achieve a concerted effort and approach. Likewise, priority was given to exploring how to incorporate the strategies into the country's current programmes.

T6.3. Follow-up and evaluation of the cooperation activities
There has been an evaluation plan for the different stages of the cooperation task. Evaluation has considered but not limited to the following: a) perception of both participating parties, b) achievement of desired outcomes of the cooperation activities, c) usefulness of the visit, d) applicability of the strategy once more information was available, e) possibly success of planning and implementation efforts.

One of the most important objectives of MASCOT was to promote South South and North South collaboration to ensure an uptake of the project results, particularly with respect to policies and programs, by the countries that may take benefit of them for improving MCH and remedy MCH inequalities. This exchange of expertise and lessons learned among or outside the participating countries is a major added value to the MASCOT project.

The MASCOT project offered the opportunities for cooperation activities either among participating countries that deliberately are interested in reproducing some relevant programs identified through the policy briefs or among countries that were not initially in the project but were exposed to its results through the partnering event that was organized in Mexico, this event brought together different type of stakeholders (basically researchers and policy makers).

Through this monitoring and evaluation of cooperation activities, we have had the opportunity to examine the two kinds of collaborations:

- Cooperation activities among MASCOT participating countries (the case of Ghana and Mozambique)
- Cooperation activities that reached countries outside the MASCOT participating countries (the case of Guatemala, Costa Rica)

Major results and achievements and major failures

Eleven Strategy Briefs were prepared and are now available at the consortium website (http://www.mascotfp7.eu/es/mascot-resources/strategy-briefs/) as PDF files that can be downloaded for easy printing and distribution. (D6.1)

The cooperation activities were a unique and valuable opportunity for stakeholders to reflect on their current health system and how strategies in the host countries could add value to their current work, instead of working in silos towards the same objective. The literature opens opportunities for countries to learn what others are doing, but a structured and in person exchange provides a more comprehensive framework to learn about what worked well, what did not and what can be done differently. Cooperation activities do not aim to 'copy/paste' strategies from one country to the other, instead they analyse how they can be adapted to meet objectives in different political, economic and social contexts. The meetings allowed stakeholders to draft a plan with concrete steps to transfer aspects of the strategies to the country and established cooperation agreements between countries to support the transfer process and any pilots before scaling up the initiatives.

Furthermore, the exchanges nurtured a dialogue of different stakeholders between and within countries. For instance, in the case of Guatemala, it was the first time that representatives from the Ministry of health and academia sat together to address a common problem, but one where the response was not concerted between sectors. They also acknowledged the importance to bring other stakeholders (e.g. technicians, municipality, and civil society) into the continued dialogue to better understand the needs, challenges and opportunities. In the other collaboration, the Ghana delegation included a multidisciplinary group of participants from policy, practice, research and the community. This significantly facilitated bringing different perspectives to the current challenges around MCH and also how the Mozambique experience could be transferred to their different areas. In addition, the meetings also provided a chance for the host country to also reflect and assess the strategy. This was particularly relevant in the context of Costa Rica. The "Hospital without Walls" as such disappeared in the 1980s and was integrated into mainstream government provision through the Costa Rica Social Security Bureau. The exchange prompted the HsP's main promoters to analyse the differences with the current system, and the impact of having lost some of the HsP strategies. As a consequence a renewed political and social dialogue is taking place to try and recover some of aspects of HsP, even if they are in another form.

Effective cooperation requires time to understand the challenges in the country and how the chosen strategy can contribute to address those challenges. The Ghana-Mozambique collaboration was envisioned early in the project development. Once it was agreed that MASCOT would support the process of learning exchange and knowledge transfer, SPH had already began a dialogue with different stakeholders at the Ghana Health Service to identify the priority area to pilot MWHs and organised further meetings and site visits to the district. As a result they were able to identify the multidisciplinary participants to invite and the main questions and expectations they had from the exchange. In contrast, Guatemala was approached by MASCOT and, even if they selected the strategy and further supporting documentation was provided in advance, the meeting was more exploratory and served to spark more interest in HsP and the need to involve other stakeholders.
The MASCOT project was successful at fostering the dialogue and cooperation between countries to continue the strategy learning transfer, which is crucial since one-off exchanges are not sufficient. Further dialogue and visits between countries are necessary to ensure successful uptake and sustainability. It would have been beneficial to support the latter that MASCOT had begun the collaboration activities earlier.

This work package was a real success for MASCOT project. In fact despite time limitation, the team in charge with cooperation activities was able to identify the countries interested in replication some specific programs, stimulated exchange between different teams, formalized the site visits and started a long term cooperation activities that will stay after the end of the project. The evaluation and monitoring of these cooperation activities showed a high level of commitment both among stakeholders that participated to the workshops and among policy makers that were involved in this process. There must be a follow up of a minimum of one year to see a concretisation of these cooperation activities in the field. As such the MASCOT project has really served to bridge the gap between researchers and policy makers which is an important role for any project to have an impact on public health.

WP7: Multilateral collaboration and knowledge transfer

General objective

WP7 aimed:

- To stimulate and promote 'South-South' and 'North-South' multi-lateral collaboration and knowledge transfer on best practices and policy advice;
- To establish direct communication with key stakeholders in relevant countries;
- To disseminate information via accessible means.
- To maximize impact and promote the sustainability of project results.

Progress toward objectives and details for each task

T7.1. Development and updating of dissemination and exploitation plan

SPI developed the dissemination and exploitation plan and defined the strategic and operational approach for dissemination and for promoting multilateral collaboration and knowledge transfer.
In addition SPI updated the dissemination plan to ensure the final months of the project were very efficient in terms of impact and maximizing exposure of the project results as by this time they were now available for wide dissemination. Also and to maximize even further the impact of the project and its sustainability SPI proposed a set of additional dissemination activities as follows:

- Preparing and organizing with support from local partner UCSC the Chile Dissemination Event as the final major event for the project as all partners would be together for the final project meeting (thus also optimising budget expenses);
- Preparing and organizing the Brussels Dissemination Event;
- Preparing and organizing the Porto Dissemination Event;
- Preparing and organizing the online training session / webinar on the decision-support tool and respective training materials (in different languages – English, Portuguese, Spanish and French for online availability after the project);
- Developing the Decision Support Tool (DST) Handbook and Future Developments Opportunities;
- Organizing the discussion and developing the Long-term sustainability strategic plan.

Regarding materials and tools it should also be noted that the brochures were updated, newsletters were produced on a regular basis, posters and roll-ups were developed as requested by partners (according to specific needs), the stakeholder list was expanded, the website and social newtorks were regularly updated and the partners supported for their own dissemination activities.

The reporting system was also simplified and an online form was created and shared with all partners for easy access and up-to-date information.

T7.2. Development and maintenance of website dedicated to the project and health inequalities in general

COHRED developed the MASCOT website (http://www.mascotfp7.eu/) and the general architecture of the platform at the beginning of the project with the aim to provide information on the project and on related events and publications, and to facilitate networking on the topics of health inequalities and mother and child health. In addition, a Facebook page, a Linked-In group and a Twitter account dedicated to MASCOT were created also at the start of the project to further encourage the interactions between researchers, policy-makers, civil society and advocacy group representatives, and other stakeholders as well as the general public.

Since the creation of the project website, SPI has been developing the text of the different sections, contributed to refine its structure and define its contents, and is currently responsible for continuous updating of the platform (e.g. publishing news, uploading articles and other resources, announcing forthcoming events of the project). SPI is also responsible for feeding the Facebook, Twitter and Linked-In accounts of MASCOT. The other partners contribute regularly to update the website by sending articles, links, news and other resources of interest for publication. The upgrading of the website has been performed with the aim to meet the needs and expectations of the target groups and to maximize communication on the project through different channels. With the amount and diversity of content that has been included in the website public and private areas, different sections and subsections (e.g. tools, reports, publications, media actions, etc.) were created to accommodate the different types of materials produced by the project and other relevant sources.

Besides, the MASCOT logo and a link towards the MASCOT website have been published on the website of each partner organisation, which were also updated with relevant project documents.

T7.3. Knowledge transfer

This task aimed to disseminate and transfer the knowledge in order to promote the adoption of tools, methods and recommendations developed in the project by countries worldwide, and notably to help policy-makers to reduce health inequalities. Continuing the work carried out in the first period the following can now be highlighted as knowledge transfer activities:

1) Scientific article presenting the results obtained namely those that refer to equity in maternal health in South Africa: "Njeri Wabiri1, Matthew Chersich, Khangelani Zuma, Duane Blaauw, Jane Goudge, Ntabozuko Dwane, Equity in Maternal Health in South Africa: Analysis of Health Service Access and Health Status in a National Household Survey, September 2013, PLOS".

2) The MASCOT 2013 Partnering Meeting was held in the *Fiesta Americana Reforma Hotel* in Mexico City, Mexico on September 25 & 26. to promote networking and multi-lateral collaboration, address health inequalities issues and disseminate the project results to a large audience: INSP, COHRED and EQY worked on the preparation of the conference establishing an agenda and inviting relevant stakeholders from Europe, Africa and Latin America. This new format assured a more in depth involvement of participants in discussions following the presentations as well as discussions in panels and group sessions. Two Keynote Addresses were made by relevant Public Health experts. On the first day of the Meeting, Dr. Juan Garay, Head of Cooperation at the European Union Representation in Mexico, made an enlightening presentation entitled: Monitoring of Health inequalities, challenges and opportunities.

As an opening to the second day, Dr. Rafael Lozano, Executive Director of the Centre for Health Systems Research of the National Institute of Public Health (INSP) of Mexico and, thus host of the Partnering Event, made a Keynote Address entitled How Can Countries Benefit from Multilateral Collaboration.

Besides the consortium partners and three of the country experts who participated in the previous stages of the project, the event brought together leading international experts from multi-disciplinary backgrounds related to different aspects of health policies addressing MCH inequalities. A total of 64 people attended the MASCOT Partnering Meeting where participants had enough time for networking and to establish in depth discussions on MASCOT results.
INSP opened a special website for the event (http://www.mascot2013meeting.org.mx/) linked to MASCOT's official website offering information and serving as a Registration Platform for participants. After the event, some information on results was posted, while the presentations and other material were published in MASCOT's website (http://www.mascotfp7.eu/mexico-event/).

T7.4. Dissemination campaign
Task 7.4 aimed to introduce the project as well as general information related to health and MCH inequalities to a large number of people, essentially through emailing and sending of newsletters to stakeholders, presentations at conferences, publication of articles and event organisation.

SPI initiated the dissemination campaign and has been supporting all partners in the implementation of their dissemination activities, in particular by adjusting dissemination materials for specific events and targets, providing hard copies of the brochure to all partners, advising on best strategies for dissemination, preparing and translating press releases, and preparing specific events for promoting the project (e.g., Brussels and Porto).

With the progress of the project and conclusion of the outputs, the number and variety of dissemination activities and stakeholders involved has increased and partners were engaged and committed to communicate the aims and results of the project. The dissemination campaign included not only activities developed at national level by partners and country experts, but also actions gathering efforts from all partners and/or on behalf of the whole consortium, such as e-mailing campaigns aimed at introducing the project and announcing its main events, collaborations for the development of papers and participation in events, or sending of newsletters.

The MASCOT partners have regularly disseminated the project results and the first press release through its website and newsletters. In addition, the project contents and results have been shared in relevant conference and events and with key networks, including the Eighth International Public Health Congress. Social Justice, Human Rights and Health Equity and for example the MED Launch of H2020.

All beneficiaries have increasingly implemented actions of dissemination over the course of the project. More and more often, partners are sharing dissemination materials and relevant news and resources. In addition, external country experts from Mozambique and Brazil, who were recruited for mapping activities and who are not official partners of the project, have disseminated information on MASCOT using dissemination and communication materials developed in the frame of the project. Whenever possible, the consortium has strengthened dissemination activities surrounding the project events (workshops in Costa Rica, South Africa and Tanzania) through large media coverage and the invitation of very relevant stakeholders (including Ministers), to ensure a high impact of the project on MCH inequalities considerations.

Moreover and as already mentioned a set of additional activities have been implemented to increase impact, exposure and knowledge transfer, including:

- Preparing and organizing with support from local partner UCSC the Chile Dissemination Event as the final major event for the project;
- Preparing and organizing the Brussels Dissemination Event;
- Preparing and organizing the Porto Dissemination Event;
- Preparing and organizing the online training session / webinar on the decision-support tool and respective training materials (in different languages – English, Portuguese, Spanish and French for online availability after the project);
- Developing the Decision Support Tool Handbook and Future Developments Opportunities;
- Organizing the discussion and developing the Long-term sustainability strategic plan.

In November 27 – 29, 2013, INSP participated in an international event in Colombia (Eighth International Public Health Congress on Social Justice, Human Rights and Health Equity – University of Antioquia, Medellin, Colombia) presenting the most relevant results of WP4 before an audience of academics and thus raising up interest in other the activities of the consortium.

Major results and achievements and major failures

The International Partnering Event in Mexico City (September 24 -25, 2013) succeeded in gathering stakeholders from the three regions of the project to discuss and reflect on MCH inequalities. Besides relevant presentations and discussions on MCH inequalities, an important issue concerning adolescent health, particularly in relation to reproductive health, was introduced and thoroughly discussed giving an opportunity for several stakeholders to establish contact for further collaboration. Most importantly, representatives from the Ministry of Health of Guatemala participated and made contact with the MASCOT country expert from Bolivia as well as with MASCOT partner IHCAI of Costa Rica that led to the planning of further collaboration activities.

A wide range of international events have been implemented through the project thus reaching to different audiences in different regions and with wide mediatic impact. A scientific publication has been published within the project period while others has been submitted. Several others are pending submission.

IMPACT

Summary

The actions taken by MASCOT resulted in impacts along various axes addressing health inequalities, especially through providing support to the development of health inequality strategies and policy development in the countries that were included in the scope of the project. Further, the project constituted a significant added value for the multilateral cooperation between Europe, Africa and Latin America as requested by the call FP7-HEALTH-2011-3.4.3 of the European Commission.

General impact: Reduction of health inequalities

Although infant mortality has recently fallen to 8.8 millions of deaths in children under 5 years old, the Millennium Development Goals have not been achieved yet. As a good indicator of health inequalities, this number reveals therefore that health inequalities, affecting more particularly vulnerable groups, such as children and mothers, remains a major social and public health concern all over the world.

In addition, since health is the key driver for growth and prosperity, health inequalities or poor level of health care directly impacts on the social and economic aspects through a loss of productivity and unemployment. In most of the countries targeted by MASCOT, these problems frequently ensued from a lack of efficient public health research system. Indeed insufficient public health research affects the design of suitable public health policy and programmes which impact on the quality of health care in the country.

The MASCOT project contributed to improving the understanding and of health research systems and research conducted within countries as a key foundation for the development of more suitable public health policies and thus a reduction in health inequalities. By identifying and mapping inequalities in each country, active MCH research projects, and evaluating different strategies and policies deployed in each country to address MCH, MASCOT has provided a wealth of information, in the form of country reports and databases for countries to use in the pursuit of successful policies to address MCH inequalities.

Further, the networking that developed between the three regions, both through the consortium, and through co-operation and partnering events initiated by the consortium, contributed to the exchange and sharing of experience and knowledge on best practices with the aim to improve public health equity in the area of MCH. This latter human impact will also have an effect at the economic level, by limiting the economic losses linked to health inequalities (as mentioned in the concept of this project), reducing medical costs (implementation of cost-effective strategies) and increasing productivity of citizens, and at the social level, by making progress in medical care, supporting the integration of a wider range of people in the society (e.g. reduction of marginalization of population clusters), and ameliorating population well-being.

Direct contribution towards the expected impacts listed in the work-programmed

A major positive outcome from the project in terms of impact has been to play a part in the realisation of the Millennium Development Goals by focusing on health services research addressing health inequalities with a particular angle on maternal and child health, and the final purpose of providing sound scientific support to Global Public Health Policies.

Project results have provided evidence on best practices and policy advice for the development of future public health interventions.

The project has contributed to building up capacity for public health and health research at national and international levels, by developing tools which map inequalities, providing simple and free access to key academic texts covering MCH, by identifying and sharing information about research teams conducting research in MCH, by identifying and sharing information about successful strategies for addressing MCH, and finally by facilitating exchanges of information between countries interested in trialling these strategies.

The cooperation between actors from many fields of expertise and many countries has expanded and generated a wide range of knowledge concerning notably the determinants underlying health inequalities and the role played by public health research and health strategies/policies in the development of health inequalities. This knowledge was translated into decision-making mechanisms and strategies (a database, two systematic reviews, country and regional reports, strategy briefs) to inform and support policy-makers.

However as long as this knowledge is not shared, it does not constitute any progress. The MASCOT state of mind thus relied on the principle of knowledge transfer and mutualisation of competencies: experienced teams will provide their support to less experienced ones with a final aim to reach and share best practices. This was evidenced especially in the co-operation activities held between Costa Rica and Guatemala, and Ghana and Mozambique. Indeed the close collaboration in the consortium between major institutions concerned by public health enabled the coordination of dissemination actions at global level – for example the employment of the systematic reviews in the development of WHO guidelines on MCH. Through this sort of network, we achieved a good level of knowledge transfer and exchanges.

DISSEMINATION ACTIVITIES

Coordinated dissemination of the outputs of MASCOT helped to increase the impact of the project outputs, such as the web-platform, the summary reports, the systematic reviews and the co-operation activities.

Over the two and a half years of the MASCOT project, a range of dissemination activities were conducted in order to maximize the impact of the project outputs.
These activities were defined by an overarching “dissemination and exploitation plan” which set out the strategic and operational guidance for all matters regarding dissemination.

Dissemination activities were always considered as not being sufficient to simply focus on basic communication activities, but to keep in mind always the global objectives of the project to foster multilateral collaboration and knowledge transfer.

As such an approach was defined and guided the implementation of activities throughout MASCOT:

1. Planning (integration, engaging partners, engaging multilaterally, focus on impact, think of plan B)
2. Implementation (flexibility, co-ordination amongst partners, maximize geographic outreach)

3. Monitoring and follow up (Plan, implement, assess, sustainability)

A summary of major dissemination activities conducted during the project follows, and can also be found in more detail in D7.6:

- **Dissemination and exploitation plan and reporting system**. Through this plan, each partner was made aware of their responsibilities and that dissemination and exploitation, together with the building of the network, are regarded as a continuous process that is actively pursued and monitored throughout the project, in order to maximize the effectiveness and impact of the project results.
    - This included a **strategic document** to guide the consortium on all matters related to dissemination and exploitation activities, and an **online reporting process** for partners to easily report their dissemination activities.
- As the project approached the final months it was considered necessary to maximize impact of the project results through an **updated dissemination plan**.
    - As such the dissemination plan was updated (October 2013) through a very pragmatic and individual approach by proposing individual and specific activities to each partner. This resulted in a very focused approach for the final months of the project to ensure a maximum impact and exposure of the project and its results.
- Dissemination activities were supported throughout the project through making available **a set of communication materials and tools** that ensured there was a coherent approach to communication throughout the project. This set included the logo, a brochure, the website, regular newsletters, a factsheet, guidelines, document templates, and press releases.
- Several **workshops and larger meetings** were held over the life of the project in order to maximize impact and achieve knowledge transfer:
    - **Costa Rica Expert Workshop**
      The workshop organized on the 11th, 12th and 13th March 2012 in Costa Rica by local partner IHCAI, gathered experts from Bolivia, Brazil, Chile, Costa Rica, Europe (France, Portugal, Switzerland, the United Kingdom), Ghana, Guinea Bissau, Malawi, Mexico, Mozambique, South Africa and Tunisia. These researchers and health experts analysed the methodologies and tools that were used to develop specific national reports to describe MCH inequalities.
    - The workshop had a total of 26 participants. A MASCOT project meeting also took place on the 15th and 16th March following the meeting. The workshop was also properly evaluated with overall very positive remarks.
    - **Mexico International Partnering Event**
      The MASCOT International Event took place in Mexico City, Mexico during 25 and 26 September 2013. It was a unique opportunity to gather experts from different countries to understand the project results and openly discuss on what can be done to reduce MCH inequalities.

- This partnering event was a major dissemination instrument in the framework of the MASCOT project. It brought together leading international experts from a multi-disciplinary background dealing with different aspects of health policy addressing inequalities particularly affecting mother and child health (MCH).

- The event aimed to provide a platform for participants to learn from the experience of other countries from North and South and to exchange and foster successful strategies aimed at reducing these inequalities. More generally the event will contribute to stimulate collaboration between countries in order to raise awareness about potential solutions.

- **Chile Dissemination Event**
  Taking the opportunity of the final project meeting in Santiago, Chile, a major final dissemination was organized on the 6th March 2014 bringing together high-level figures and all project partners for maximum exposure of the project, and its results.

- The participants included high-level figures of the Chilean health and research system.

- The event was considered a major success not only because of the presence of high-level speakers including the Chilean Health Minister Elect (now in office) Helia Molina, but also through the exposure of the main Chilean media, including major TV channels and newspapers.

- **Brussels Dissemination Event**
  On the 19th March 2014 MASCOT organized a dissemination event in Brussels on the theme "Maternal and Child Health Inequalities in Developing Countries – challenges, cooperation and opportunities".

- The event presented the project results but also brought external experts from different organizations to present their perspectives on the challenges and opportunities faced while working with maternal and child health inequalities and health inequalities in general.

- The event didn't have the expected attendance (total of 11 participants from 28 registered), however extensive efforts have been made in advance through a process of invitations to a selected database (450 approx) followed by further targeted invitations and phone calls.

- Nevertheless the event was a good opportunity to present the project results to other experts and also to understand what other organizations have been doing in regards to health inequalities, particularly maternal and child health inequalities.

- **Porto Dissemination Event**
  By partnering with the University of Porto Public Health Institute (http://www.ispup.up.pt/), the MASCOT project had the possibility to hold a dissemination event to showcase the project main results and in particular the decision-support tool on the 28th March 2014.

- It was a unique opportunity to present the project to different researchers, master and PhD students working in the public health field and also to discuss the potential of the project results to future research. The event had a total of 33 participants.

- **Other dissemination activities included:**

  - **Online Training Session / Webinar and training materials**
    It was always the intention of the project to widely disseminate the potential of the decision- support tool and also to train health experts (including policy makers) on how to properly use this tool. Moreover it was also the intention of the project to guarantee the sustainability of this tool through engagement of potential supports that could have the capacity to further explore/enhance the tool.

  - **Long-term sustainability strategic plan**
    This document was developed to provide strategic guidance on the exploitation of opportunities based on the MASCOT results.

    The "Long-term sustainability strategic plan is a vision for the future on the uptake of the MASCOT results" and is therefore intended to review the project main results and provide a common vision of the consortium on the uptake of such results.

  - **Scientific publications**
    Based on MASCOT work there is one scientific paper published for the moment – "Njeri Wabiri, Matthew Chersich, Khangelani Zuma, Duane Blaauw, Jane Goudge, Ntabozuko Dwane, Equity in Maternal Health in South Africa: Analysis of Health Service Access and Health Status in a National Household Survey, September 2013, PLOS".

    Even though this is the only paper published other papers have already been submitted or are in preparation for submission, and are included in D7.6.

- **With regards to dissemination activities and ensuring the longer-term impact of the MASCOT project, the following should also be noted:**

  - All project results have been achieved and have been disseminated accordingly with the proper tools through the appropriate channels; - a set of dissemination materials and tools have been developed right at the beginning of the project and made available to all partners to facilitate dissemination.

  - A wide range of international events have been implemented through the project thus reaching different audiences in different regions and with wide impact; - Partners have implemented a diversified set of individual activities with a far reaching effect for disseminating the MASCOT project;

  - One scientific publication has been published within the project period while another has been submitted. Several others are pending submission.