HEALTH AND DEVELOPMENT

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Demographic growth of Africa: an opportunity or a threat?

In 2011 the world population reached 7 billion. According to United Nations forecasts, the number of inhabitants on the planet will continue to grow in the forthcoming decades, reaching 9.3 billion in 2050 and surpassing 10 billion people in 2100. The Asian continent, which has contributed more than any other to the growth of the world population, will experience a downturn from 2050 onwards. The only continent that does not exhibit a reverse trend is Africa. According to average estimates, the African population is expected to double in 2050 (over 2 billion) and to triple in 2100 (3.5 billion). The bulge in the young population promotes development. However, a growing population has its costs: that population has to be fed, educated, and looked after. If this is not the case, that same mass of young people with no opportunities threatens to be a hindrance to development, and to produce an increase in poverty and inequality.

A new profession is making headway: the medical specialist in Global health. These physicians have “the world in their head”, because they are aware of the relationships between individual and society, are conscious of balance and justice among countries, and have a holistic approach to health. Besides being doctors, they are bona fide advocates of Global health.
During our sixty-year-long journey we have devoted time and energy and taken the risk. We have experienced what it means to cooperate in distant, often forgotten lands, created a courageous team of doctors, nurses and midwives, and endeavoured to strengthen the most fragile health systems. During this time, room has always been given to studying, research and training. Intervention in the field has always gone hand in hand with training and can probably explain in part our organization’s longevity and strength.

It was clear from the very outset that training was a pivotal aspect not only of earnest professionalism but also in instilling, in young physicians new to CUAMM (University College for Aspiring Missionaries and Missionary Doctors), that spirit of solidarity, sharing and open mindedness required to embark on a journey to the last mile, to reach the poorest members of that suffering, often invisible continent.

In pursuing our journey, we remain convinced that training and action are two sides of the same coin. Without them, quality intervention and care could not be provided in the districts at which we operate, and long-term, valuable projects designed to support and transfer skills to the community could not be built. This prompted us to collaborate with various universities and local training centres in Africa, where we use our wealth of knowledge to train young doctors and nurses.

A synergy between training and field work has also been achieved in the “Junior Project Officer” (JPO) project, which has been running for 10 years. It envisages a period of study and field intervention for resident doctors from Italian universities. Residents spend between 6 and 12 months in Sub-Saharan Africa, alongside the poorest of the poor, where they can put what they have learned in the study programme into practice and explore concepts that often transcend clinical medicine and become values anchored in mature, responsible professional ethics.

Thanks to a national agreement negotiated by SISM (the Italian Medical Students’ Secretariat), CUAMM also offers a similar but briefer pathway to younger students, giving them first hand (head and heart) experience of a developing country. The programme involves two centres at which our organization is actively involved: Wolisso hospital in Ethiopia and Tosamaganga hospital in Tanzania.

Doctors with Africa CUAMM’s commitment has continued to grow in recent years, even in Italy. Synergies with the Italian Observatory of Global health (OISG) and the Italian Network for Global health teaching (RIISG) have led to the creation of an action network between our organization and various Italian universities, giving prominence to health and advancing an approach that restores centrality to people in their entirety and complexity. Often disease is, instead, observed without consideration of setting and causes. This is our point entirely. When we talk of Global health we mean adopting a broader approach, mindful of the “social determinants” impacting the wellbeing or suffering of people and communities: income, education, occupation, diet and the list goes on. These are the basics of Global health, which studies the person and their community rather than the individual disease. For those of us working in the field of international health cooperation, recognising the importance of the operational setting is an essential part of learning to act respectfully towards the local culture and becoming aware of exactly who we are dealing with.

Raising awareness among young students about this “global” approach is a good way of activating and training the medical profession to be alert to and responsible for the world it lives in, to discern special cases but also to devote time to justice. Along these lines, Doctors with Africa CUAMM has supported an event entitled, Training of Trainers, held just a few weeks ago in Rome and addressed to academic teachers keen to learn more about Global health, understand its scope, get an update on teaching methods, and become channels for disseminating the discipline in their own universities.

Only by training doctors and health providers to be responsible for and aware of the relationships between individuals and society can we take care of the world and fight for the right to health. Only in this way will doctors really become “advocates of Global health”.

VENTURING ALONG THE GLOBAL HEALTH PATHWAY

When we talk of Global health we mean adopting a broader approach, mindful of the “social determinants” impacting the wellbeing or suffering of people and communities. Recognising the importance of the operational setting is an essential part of learning to act respectfully towards the local culture and becoming aware of exactly who we are dealing with.

TEXT BY / DANTE CARRARO / DIRECTOR OF DOCTORS WITH AFRICA CUAMM
**THE MARKET AND THE CHRONIC DISEASES**

Chronic diseases devour the gains of economic development and cancel out the benefits of modernization. In combating them, the governments are almost absent and unable to intervene in a sector now dominated by the market; according to the Lancet, “low-cost and highly effective solutions” do exist, but they lack the ability to adopt them.

TEXT BY / GAVINO MACIOCCO / DEPARTMENT OF PUBLIC HEALTH, UNIVERSITY OF FLORENCE

“Today many of the threats to health that contribute to the spread of chronic diseases come from multinational corporations that are big, rich and powerful, driven by commercial interests and far less friendly to health”, declared Dr. Margaret Chan, Director-General of the WHO.

“Chronic diseases, especially cardiovascular diseases, diabetes, cancer, and chronic obstructive respiratory diseases, are neglected globally despite growing awareness of the serious burden that they cause. Global and national policies have failed to stop, and in many cases have contributed to, the chronic disease pandemic. Low-cost and highly effective solutions for the prevention of chronic diseases are readily available; the failure to respond is now a political, rather than a technical issue”, *Lancet* (2010).1 Similar concepts were present in the opening report given by the Director-General of the WHO, Dr. Margaret Chan, at the *World Conference on Social Determinants of health in Rio de Janeiro* (October, 2011).

“Chronic diseases are on the rampage, driven as they are by powerful, universal forces, like rapid urbanization and the globalization of unhealthy lifestyles. Left unchecked, these diseases devour the gains of economic growth. They cancel out the benefits of modernization. […] Chronic diseases deliver a two-punch blow to development. They cause billions of dollars in losses of national income, and they push millions of people below the poverty line. […] Every corner of the global is now struggling with a skyrocketing prevalence of obesity and overweight. Rates of obesity in children are rising several times faster than in the adult population. This is not a failure of individual will power, but a failure of political will at the highest level. […] Establishing and enforcing health-promoting policies means pushing for fairness against some extremely powerful and pervasive commercial interests”. Margaret Chan gave a few examples of how multinational food and tobacco corporations are able to impose their products and spread harmful lifestyles, through blackmail and economic pressure. For instance: “France announced plans to impose a so-called ‘fat tax’ on sugary drinks. One multinational beverage producer immediately retaliated with threats of an investment freeze”. It is not hard to imagine what happens in weaker countries that are more vulnerable to blackmail. Dr. Chan ended her report with the following unanswered question (or worse still, one that begs an implicitly negative response), “Will governments now finally put the health of people before the health of corporations, especially at a time when the economic downturn keeps getting deeper?”.

In the history of the fight against infectious pathologies, public health has benefitted from formidable tools coming from scientific discoveries and the action of public administrations: the production of vaccines, measures to make water drinkable and to dispose of waste, the role of education, and improvements in general living conditions. In combating chronic diseases, States are almost absent, unable to intervene in a sector now dominated by the market. As reported in the Lancet, «low-cost and highly effective solutions do exist but there is a lack of ability to adopt them. The case of chronic diseases provides some insight into the meaning of Global health and the increasingly close links between health and globalization:

- There has been a rapid, extensive spread of harmful lifestyles throughout the planet (particularly, cigarette smoking and a diet based on junk food and sugary drinks). It is a global phenomenon which, in a short space of time, has standardized unnecessary eating habits throughout the world.
- The effects on the health of populations – particularly the poorer groups – have been devastating, but this is not a concern for the multinational food, beverage and tobacco corporations which have gained and continue to gain enormous profits from this situation.
- National governments and international agencies are «absent and unable to intervene» vis-à-vis the power of multinational corporations.

Is all this tolerable?

NOTES

BRAZIL, OCTOBER 2011
Margaret Chan, Director-General of the WHO, at the first World Conference on the social determinants of health. During her intervention, Dr. Chan criticized the effect of globalization processes and the actions of multinationals on resource distribution among the world’s various populations. Besides economic considerations, the dynamics that currently govern the world also create enormous health-related difficulties, where the poor are concerned, in terms of both access to care and the lifestyles imposed by the consumer system (tobacco, “junk food”).
UNIVERSITY COURSES IN GLOBAL HEALTH

Between 2007 and 2010, information was collected on the teaching and organization of Global health courses in Italian universities. A single report was produced summarizing the results of the mapping process. The main strength lies in the high level of student participation that shows how students could become protagonists of a change in terms of health.

TEXT BY / MARIO STACCIONI / ALICE PERFETTI / MEDICAL STUDENTS, UNIVERSITY OF GENOA
RAFFAELE DE FILIPPI / MEDICAL STUDENT, UNIVERSITY OF FOGGIA

Using five questions, several students from the Italian Secretariat of Medical Students interviewed Stefania Bruno, physician, specialist and confirmed researcher in Hygiene and Preventive Medicine at the Institute of Hygiene of the Catholic University of the Sacred Heart of Rome and Giulia Silvestrini, resident doctor training at the post-graduate School of Hygiene and Preventive Medicine of the Catholic University of the Sacred Heart of Rome.

1. WHAT PROMPTED THE NEED TO MAP THE GLOBAL HEALTH COURSES IN THE FACULTIES OF MEDICINE IN ITALY?

The need to “map” the courses in Global health in the faculties of Medicine in Italy started as a priority objective of the three-year project, “Equal opportunities for health; action for development,”1 funded by the European Union and coordinated by Doctors with Africa CUAMM over the period 2007-2009.

After assessing the mappings made in the course of the “Equal project” and comparing them with the results of similar mappings based on reports from lecturers and residents in Hygiene and Public health, the Italian Network for Global health teaching (RIISG) cast light on the extremely fragmented subject matter and lack of uniformity in the topics ascribed to Global health. This persuaded us that it was a priority to continue monitoring how training was being provided at national level, in order to spotlight the more consolidated teaching experiences and identify any situations that might benefit from intervention to close the training gap.

2. HOW WAS THE LAST MAPPING CARRIED OUT?

Between 2007 and now, three mappings have been made of courses in Global health currently being provided at Faculties of Medicine in Italy, based on a survey of the academic years 2007/2008, 2008/2009 and 2009/2010. The faculties surveyed in each academic year were 40, 36 and 36, respectively, with an average coverage rate of 92%. The first two mappings were carried out as part of the “Equal project”, whereas the mapping for the academic year 2009/2010 was conducted as part of a collaboration between the Italian Secretariat of Medical Students (SISM) and Doctors with Africa CUAMM. The tool used to collect information on all three mappings was a hard-copy and/or online questionnaire designed to collect information on the teaching and organization of courses.

RIISG promoted the creation of a final report designed to consider the findings of all three mappings in a single document and thus compare the characteristics of the undergraduate training offer on topics relating to Global health, in the three-year period 2007-2010.

3. CONSIDERING THE RESULTS OF THE LATEST MAPPING, WHAT DO YOU THINK ARE THE STRENGTHS OF GLOBAL HEALTH TEACHING IN ITALIAN FACULTIES OF MEDICINE?

What emerges from the report is the great interest and participation of students in these courses. Student enthusiasm is such that lecturers are motivated to try out alternative teaching methods, due in part to the personal contribution of students who are aware of the importance of these topics and understand the role they could play as future health professionals and protagonists of a change in terms of health.

Quantitatively, the average number of courses indicates an upward trend: the national average (number of courses/faculties of medicine) increased from 0.65 (SD11.53) in 2007 to 1.11 (SD11.18) in 2010. Specifically, if we consider the data by geographic area, we see a rising trend in the number of courses for all geographic areas considered: in 2007, the average number of courses per faculty was 1.24 for the North, 0.1 for Central Italy and 0.31 for the South and islands.

Qualitatively, too (number of hours, official recognition with the assignment of training credits, teaching methods, multidisciplinarity), there is growing attention towards and awareness of Global health courses at Faculties of Medicine, to which an increasing number of resources are being allocated.

4. AND WHAT ABOUT THE WEAKNESSES?

Over the three-year survey period there are marked differences in the number of courses among the three geographic areas – North,
Centre and South – and a greater range of training opportunities in the faculties of Northern Italy, although the increase in the number of courses per faculty is greater in Central Italy. Qualitatively speaking, while there has been a marked improvement in Central-Southern Italy, available training opportunities remain limited.

Another critical factor is course content since there is still a lack of unanimous agreement about the meaning of Global health. There is often a tendency to identify it with topics related to Travel Medicine or Tropical Medicine, to the detriment of the topics of health determinants and inequalities. This suggests the need to create common ground which clearly deserves to be more shared and disseminated. A final aspect to bear in mind is that, to date, the “mapped” courses are all elective. Accordingly, RISG intends to work on achieving shared cultural motivation and the permanent inclusion of Global health topics in medical degree study programmes, based on an international consolidated approach, widely documented in the medical/scientific and pedagogical literature.

5. HOW HAS THE NEW MAPPING BEEN DESIGNED? WHAT IMPROVEMENTS HAVE BEEN SOUGHT?

The focus of the new mapping was the information collection method and the need to work towards standardising the data collection procedures used by the SISM students, who remain key partners. This was achieved by drawing up a new form designed to fine tune the quality and quantity of collected information. Another finding was the need to train SISM students to administer the questionnaires to the lecturers. Accordingly, the national SISM contact people will see to directly training the various local contacts.

Lastly, preliminary work was carried out with the collaboration of lecturers, students and Doctors with Africa CUAMM, to improve mapping coverage and to identify which lecturers to survey through the questionnaire. The objective was not only to reach as many professionals involved in course organization as possible, but also to raise awareness among the academic community.

NOTES

1 Hereinafter, “Equal project”.

GLOBAL HEALTH. WHERE?

Below is a map of Italian universities that have introduced a course on Global health. The teaching approach and content of each course keep guidelines provided by the standard curriculum.

The training pathway in Global health is present in many universities. It consists of a series of optional courses for students, organized for the most part within Faculties of Medicine but – in some cases – as a component of other degree courses, such as Economics and Social Sciences. The map below provides a list of the universities that hold courses on Global health in Italy. The lecturer is the one to decide the teaching approach and content of each course, in keeping with guidelines provided by the standard curriculum. The following modules envisaged by the curriculum are addressed:

- health and its determinants;
- the origin and development of healthcare systems;
- health as a human right;
- globalization and health;
- inequalities in health and in healthcare;
- immigration and health;
- international health cooperation.

For the detailed course programme, contact the reference university.
In recent years the term *Global health* has gained increasing importance. In defining its scope, the pivotal characteristic is attention to health as a fundamental right, to the social determinants of health and to social injustice that increases health inequalities and “kills on a large scale”. Trainings for professionals and courses for students aim at share a “new paradigm” for health.

The term “Global health” has been gaining importance for several years in health policy, foreign policy and health diplomacy agendas and debates, in university training strategies and programmes and in development and health cooperation partnerships. In both America and Europe many academic, university teaching and post-university institutes have begun to develop professional skills in Global health that go beyond the conventional boundaries of Tropical Medicine or Public health. In Italy, since 2009, a *standard curriculum* (SC) in Global health based on a «common commitment» with the academic world, public health institutes and non-government organizations, has been drawn up, subsequently revised, and has taken shape in the European project, “Equal opportunities for health: action for development”. This curriculum has been widely encouraged since 2010 by the Italian Network for Global health teaching (RIISG) and extensively incorporated in elective university and professional updating courses within the Italian CME programme. In defining its scope, the pivotal characteristic is attention to health as a fundamental right, to the social determinants of health and to social injustice that increases health inequalities and “kills on a large scale”.

This new multidisciplinary, intersector field of training offers opportunities and challenges: the opening of cultural horizons that reach beyond clinical specialities and public health and the updating of the conventional teaching model of biomedical science. Accordingly, Global health must be viewed as a “new paradigm” for health and healthcare, in contrast to the biological paradigm that has long dominated, and continues to dominate, the teaching of biomedical sciences worldwide.

To consolidate the fundamentals and values of this new commitment, the Italian Network for Global health teaching (see the box on pag. 9) has, through the university domain and in response to growing proposals and requests from students, conducted a comparative analysis of the curricula drawn up by the American Global Health Education Consortium and a similar British network. The result was to integrate the work – originally presented as a list of teaching modules in a *standard curriculum* - in the form of training objectives (TO), divided under the headings of knowing, knowing how to do and knowing how to be. This was to stress the methodological importance of placing students and their training needs at the centre of things and to highlight how the teaching of Global health is not limited to the transfer of knowledge, but must also include clinical practice set-
operating in situations with limited resources: two sides of the same coin.

This framework, derived from the original standard curriculum, fosters adaptability to various settings, within the context of a highly structured, varied training programme. At university, where teaching is mainly, but not entirely, concentrated at Faculties of Medicine, Global health topics either take the form of compulsory modules (particularly Hygiene and Public health) or, far more often, of optional courses (ETA) of variable duration (4-20 hours). In non-University settings (lifelong learning), particularly CME programme-related teaching within the National Health Service and with the collaboration of NGOs such as Doctors with Africa CUAMM, content is adapted to the type of refresher course being provided (seminars, company training programmes, self-training groups etc.) and is based even more on experiential and problem-based learning.

In the last two years of the Global health training experience in Italy, the following aspects have emerged in particular:

- it is essential to focus on a health policy perspective based on analysis of health determinants and aspects of the political economics of health, giving priority to interdisciplinary, multisector network actions, as stressed in international teaching reference texts;
- in training new professionals in healthcare ethics, staff need to be reoriented towards the principles of equity in service access and the protection of vulnerable sectors, thereby defending the concept of health as a right rather than as an expensive commodity.

THE RIISG

A network covering the whole of Italy, formed by university lecturers and other experts from universities, study centres and organizations, including Doctors with Africa CUAMM.

RIISG is the Italian Network for Global health teaching and its general objective is to contribute to improving the health of the population and reducing inequalities between and within countries, by improving health provider knowledge, attitudes and practices.

RIISG undertakes to:

1. contribute to the conception, discussion and dissemination of Global health, understood to be a new multidisciplinary approach to health that considers individual health and disease processes to be strongly related to collective social and economic dynamics;
2. promote Global health teaching at both academic and professional level;
3. create room and promote opportunities for exchange and dialogue on Global health with other disciplines (including Anthropology, Law and Economics etc.);
4. promote a public debate on the themes of Global health and build awareness among civil, professional and academic institutions with a view to activating processes of change that can translate good practices into concrete actions.

Lecturers and members of the following currently belong to RIISG:

- Doctors with Africa CUAMM
- International and Intercultural Health Research Centre of Bologna University (CSI);
- CERGAS Global health and Development Area - Luigi Bocconi Business University of Milan
- “La Sapienza” University of Rome;
- Institute of Hygiene, “A. Gemelli” Faculty of Medicine, Catholic University of the Sacred Heart, Rome;
- Department of Public health of Florence University;
- Specialization school in Hygiene and Preventive Medicine of Perugia University;
- Italian Secretariat of Medical Students (SISM);
- Italian Society of Migration Medicine (SIMM);
- Italian Society of Doctor Managers
- Italian Observatory on Global health (OISG);
- National Council of Residents in Hygiene and Preventive Medicine;
- Interdepartmental Group of Rome.

NOTES

SUDAN, JANUARY 2012
Some patients waiting in a queue for an eye examination at Kartoum hospital. The examination will be performed by Chinese doctors working in Sudan under the umbrella of the “Trip of light” project, which forms part of Sino-Sudanese bilateral relations. The strong presence of this Asiatic country in Sudan (as in other African countries, including for example Angola) is not restricted to the economic-business relations, but penetrates more deeply into the social fabric, by directly providing the population with essential services.
TEACHING GLOBAL HEALTH AT UNIVERSITY

Global health is becoming an increasing part the training pathways offered by Italian universities. Two different examples of this development are related by SISM (Secretariat of Italian Medical Students) students: on the one hand, the consolidated Italian experience; on the other, the enthusiasm accompanying the newly established course at Palermo University.

TEXT BY / CLAUDIA AMADASI / MEDICAL STUDENT, PADOVA UNIVERSITY; VALENTINA GAMBINO, ANTONINO DAVIDE CIRINGIONE, GIULIANO CASSATARO / MEDICAL STUDENTS, PALERMO UNIVERSITY

Several members of SISM decided to collect the voice and viewpoint of students on the teaching of Global health in Italian Faculties of Medicine, through two testimonials that form this article. The report begins with the experience in Padova, where these topics have been covered for some years now in the form of optional courses. The more tried and tested experience is followed by a taste of the enthusiasm of the students from Palermo, who encountered global health themes for the first time last October.

PADDOVA: THE VARIOUS TRAINING OPPORTUNITIES FOR MEDICAL STUDENTS

The syllabus for the degree in Medicine at Padova University currently includes a number of university training credits for optional courses. Some of these give students the opportunity to approach Global health themes for the first time. One of these courses is organized directly by Doctors with Africa CUamm in collaboration with several lecturers; it is revisited each year and, albeit an optional course that the students follow at will, participation is very high, with an estimated number of around one hundred students per year. As with all optional courses, it lasts 10 hours over 5 days and comprises a core of basic subjects:

- health determinants and health as a human right;
- development of health systems;
- health inequalities;
- immigration and health;
- international health cooperation.

The not over-rigid format means that each year the subjects dealt with can be reviewed and investigated to a greater or lesser degree, in order to address the most topical issues. It can form part of the core curriculum for the fifth year, but participation is also open to students from other years, who receive a certificate of attendance.

Other optional courses that address Global health themes are the course in Migration Medicine, held by Prof. Ossi, and two courses (at two levels) devoted to Travel Medicine, organized by Dr. Flavio Lirussi. For these courses both lecturers recruit the help of Dr. Andrea Rossanese, internist and contact person for Tropical Diseases at Sacro Cuore Don Calabria Hospital in Neigrar (Verona).

The local branch of SISM also takes an active part in this already varied student training schedule. The course in Migration Medicine, which began in 2004, just months after establishment of the Padova branch of SISM, has become one of the “historic” ventures, which is reproposed every year with all the latest updates. The focus is shifting from cooperation and development, which were pivotal in the early years, towards aspects of immigrant health and, more specifically, the topical theme of irregular immigrants’ right to health. A course on Migration Medicine organized by SISM students provides a different take on the subject compared to classical university courses. While the professional approach to organization and presenter expertise are upheld (over the years, doctors, lawyers, economists and sociologists have been invited to speak), the students have sought to create a more relaxed, almost “peer-to-peer” environment, where they can explore and follow up any aspects that arouse their curiosity, ask questions and start debates, without being bridled by timidity or awe-inspired fear.

While tenaciously addressing the issues at local level, the Padova branch has also given visibility to SISM’s national proposals, particularly the Globality Workshop. Over the years and at the various editions, many medical students from the University have taken part in both levels of the Workshop, injecting them with a large dose of enthusiasm to share with their fellow students.

The medical students of Padova are thus given the opportunity to investigate Global health issues within a broader and broader, increasingly specialized curriculum. Since the courses are optional, it is up to them to take advantage of the offer. The large numbers of participants at these courses is, however, evidence of growing interest among students, who have an internationalist predisposition, are highly sensitive and have a strong desire to become all-round doctors, aware of the wellbeing not only of the community in which they operate but of the whole world.

PALERMO: OPTIONAL TEACHING ACTIVITY IN MEDICINE AND GLOBALIZATION

“How are medicine and globalization associated?” This is the key question to ask when preparing to take part in an optional teach-
ing activity in Medicine and Globalization, of the type organized, as part of the Degree in Medicine at Palermo University, by Prof. Giacomo De Leo, Dean of the Faculty of Medicine, and Dr. Mario Affronti, Chairman of the Palermo branch of the Italian Society for Migration Medicine (SIMM) and head of the Migration Medicine Service at the University Hospital. The key words of the optional course title give some idea of the really complex issues to be explored: on the one hand, the heterogeneous, open-ended field of medical science and on the other, the globalization process, understood as the coming together of the world’s cultures and other related topics.

Dr. Affronti came upon the idea for this optional teaching activity after taking part in a training course on the same topics, where the “promoters” were Dr. Martino Ardigò and Dr. Marta Brigida, both actively involved in the International and Intercultural Study and Research Centre of Bologna, and Dr. Alessandro Rinaldi of the “La Sapienza” University of Rome. The same group, accompanied by Dr. Annalisa Saracino, has now formed the team of lecturers for the Palermitan activities.

On the first day of lectures, the “Maurizio Ascoli” lecture hall was packed with over two hundred students. The course did not run like a series of ex cathedra lectures, but took the form of interactive study days. The presentation of multimedi al material, the creation of working groups and the establishment of learning-through-play conditions fostered the understanding that the subjects being studied were important concepts of inter- and multiculturalism, of Global health and health determinants, and of situations of inequality in access to care and healthcare services.

The Faculty of Medicine of Palermo was the first in Sicily to introduce this type of course into its training programme, albeit as an optional discipline. However, although the event in question was novel, this is not the case in the rest of Italy and at international level. For some years now, numerous European and non-European universities have included in their study programmes strong references to the concept of Global health, in the wake of the presentation of the work of the WHO Commission on Social Determinants of Health. Moreover, in Italy, Doctors with Africa CUAMM have played an important role in the widespread introduction of university courses on Global health, partly due to the reverberations of the “Equal opportunities for health: action for development,” project, coordinated by the Association and partnered by SIMM. Italian Network for Global health teaching (RIISG) training echoed the above project in the belief that Global health themes are instrumental to comprehensive training not only of health sector providers but also of other professional figures (anthropologists, political scientists, economists). The three-day experience in Palermo aroused so much enthusiasm that several students went on to form a group of “activists” which, with the help of Dr. Affronti and through self-training, start to implant the culture of “global medicine” in the local student community, not only as a field of knowledge but also as the behavioural habitus of future physicians. These experiences and many others throughout Italy unveil students’ interest in these issues and highlight the need to include Global health themes in our universities, not only through optional courses, but also as part of university curricula, so that the new health paradigm, to which the RIISG refers, reaches all Italian students of Medicine, not just a “chosen few”.

### Table 1 / The Subjects of the Optional Teaching of the Last October - Palermo University

| GLOBAL HEALTH AND HEALTH DETERMINANTS | LECTURERS: DR. ARDIGÒ MARTINO, DR. MARTA BRIGIDA, INTERNATIONAL AND INTERCULTURAL STUDY AND RESEARCH CENTRE, UNIVERSITY OF BOLOGNA |
| HEALTH INEQUALITIES | LECTURERS: DR. ARDIGÒ MARTINO, DR. MARTA BRIGIDA, INTERNATIONAL AND INTERCULTURAL STUDY AND RESEARCH CENTRE, UNIVERSITY OF BOLOGNA |
| GLOBAL HEALTH AND INTERNATIONAL COOPERATION | LECTURER: DR. ANNALISA SARACINO, DOCTORS WITH AFRICA CUAMM |
| HEALTH AND HEALTH SYSTEM | LECTURER: DR. ALESSANDRO RINALDI, “LA SAPIENZA” UNIVERSITY, ROME |
| GLOBALIZATION AND HEALTH | LECTURER: DR. ALESSANDRO RINALDI, “LA SAPIENZA” UNIVERSITY, ROME |
CHRONIC AND ACUTE MALNUTRITION IN ETHIOPIA

In 2008, the main cause of paediatric admissions at Wolisso hospital was severe acute malnutrition. Chronic malnutrition is also very widespread. To combat it, priority must be given to reaching the population proximally, through public health interventions whose objective is to prevent and identify nutritional deficiencies.

TEX BY / GIORGIA SOLDÀ AND LIVIANA DA DALT / UNIVERSITY OF PADDOVA
FABIO MANENTI / DOCTORS WITH AFRICA CUAMM

In 2005 the Residency Programme in Paediatrics of Padova University established a collaboration with Doctors with Africa CUAMM, under the umbrella of the “Junior project officer” (JPO) scheme. Since then, 12 residents have been involved in 6-month placements in an African country: 4 in Ethiopia and 8 in Mozambique. The JPO scheme has proved to be not only a clinical experience in a developing country but also a real opportunity to develop research projects in a clinical-organizational setting. This is the setting of the work presented in this article.

INTRODUCTION

The fourth Millennium Development Goal envisages the reduction in child mortality by two thirds (compared to 1990 rates) by 2015; the utmost attention is paid to this parameter considered to be highly indicative of general population mortality. The determinants of child mortality have been extensively studied; they include factors that act “at a distance”, mechanisms that influence mortality at the intermediate level and the actual direct causes. Distal determinants include, above all, socioeconomic aspects such as per capita income, social status and educational level. Among the intermediate processes are environmental and behavioural aspects, relating to the family context. These are in turn directly related to the so-called proximal causes of death, i.e. the determinants closest in time to the final event, i.e. the diseases specific to the given setting.

There are extensive reports in developing countries of a high prevalence of comorbidity, i.e. the interaction between two or more different pathologies, diagnosed at the same time in the same patient. In the past, numerous studies identified specific pathology-related prognostic signs, but the literature has recently addressed the fact that the risk of death in children admitted to hospital in these countries is frequently determined by the presence of multiple problems that act synergically and are potentiated. In some settings in particular, high mortality rates are brought about by the strong synergy between malnutrition and infectious diseases. Hence malnutrition has for some time been considered an underlying cause and a cross-cutting factor responsible for over half of childhood deaths. Child malnutrition can present in a multitude of clinical forms. Stunting is an organism’s bio-economic response to chronic malnutrition and a way of sparing, where possible, the nervous, immune and muscular systems, at the expense of height. Genetic makeup being equal, height reflects an organism’s linear growth in the ante- and postnatal period. Being stunted, i.e. small for one’s age, is considered to be a long-term cumulative effect of inadequate nutrition.

Wasting is, instead, extreme thinness: the muscles, skin, mucous membranes, intestines, heart, immune system are worn out. This characteristic is considered to be the result of the organism’s recent exposure to a negative nutritional setting. A wasted child is one at high risk of complications and death in the short term.

Another manifestation of a seriously worsened nutritional state is kwashiorkor, characterised by hunger edema, i.e. bilateral edemas which onset in the lower limbs, subsequently extending to the whole body, but are not ascribable to other medical causes. Wasting (or marasmus) and kwashiorkor are considered to be forms of severe acute malnutrition and require hospital treatment, with the standardised diagnostic-therapeutic protocols distributed by the World Health Organization. Stunting is instead the result of chronic nutritional deficiency, not subject to specific treatments.

Ethiopia is renowned for its high prevalence of malnutrition: the most recent WHO reports, relating to 2009 data, estimate that 44% of children aged under five are underweight for their age, 12% are seriously malnourished (wasted) and as many as 51% are chronically malnourished (stunted). The under-five mortality rate in Ethiopia has fallen from 210 deaths every 1,000 live births recorded in 1990 to 104 every 1,000 live births in 2009. This improvement is not, however, sufficient to achieve Millennium Developmental Goal no. 4.

OBJECTIVES

The aims of this study were as follows: to analyse the nutritional state of the paediatric population accessing Wolisso Hospital; to describe the prevalence of acute and chronic malnutrition in this population, according to WHO definitions; to assess the level of importance of both acute and chronic malnutrition among the reasons for admission and, more generally, to de-
termine the relationship between the nutritional state of the children and intrahospital mortality among the under-fives.

**SETTING AND METHODS**

St. Luke’s Hospital in Wolisso, in the Region of Oromia, serves a catchment area of over one million inhabitants, in a predominantly rural setting. It has been operating since 2001 and is run by Doctors with Africa CUAMM in collaboration with the Ethiopian Catholic Church and Ministry of Health. There is a growing number of admissions at the facility, with a monthly average of 800 children over the last three years, of whom almost 30% are aged under 5 years.

The study was based on all children aged between 0 and 60 months, admitted to the paediatric ward of St. Luke’s between 26 March and 25 June 2008, irrespective of cause. At the time of admission, anthropometric data were collected on each patient to assess nutritional status, according to the reference standards indicated by the National Center for Health Statistics and by WHO. Data were collected on the main reason for admission, any associated pathologies and the outcome of each patient. All the variants of nutritional deficiency were recorded, as indicated in **Table 1**: acute malnutrition in the forms of marasmus and kwashiorkor, chronic malnutrition (stunting), and the condition of low weight for age. All the variables were then included in a multivariate analysis to assess how nutritional status influenced patient outcomes.

**RESULTS**

During the study period, 316 children were admitted to the paediatric ward. Of them, 40% were less than one year of age. The most frequent reason for admission was severe acute malnutrition, followed by respiratory and gastrointestinal infections and malaria (Graph 1).

The general mortality rate among the children admitted during the study period was 9.2%. The overall nutritional status of the admitted patients is shown in **Graph 2**. Of the admitted patients, 32% were in a state of severe acute malnutrition: 4.6% of them presented kwashiorkor, 45.5% had marasmus. A high proportion of patients (11.9%) presented a combined form of marasmus-kwashiorkor. In these latter, the height/weight indicator of acute malnutrition was much lower than the average for age, despite the presence of the edema characteristic of kwashiorkor. Intrahospital mortality was two-fold higher in children affected by severe acute malnutrition compared to children with non-acute malnutrition (15% versus 6.5%).

In addition, anthropometric analysis of all admitted patients revealed a high prevalence of children affected by stunting (i.e. with signs of chronic malnutrition), equal to 59% of the total, and of underweight children (low weight for age, attributable to

### TABLE 1 / TYPES OF MALNUTRITION AND THEIR DEFINITION

<table>
<thead>
<tr>
<th>Type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEVERE ACUTE MALNUTRITION</strong></td>
<td>Extreme thinness, with weight/height indicator &lt; -3 standard deviations from the mean according to the reference tables (WHO/NHCS) (= marasmus) or presence of bilateral edemas, not attributable to other causes (=kwashiorkor)</td>
</tr>
<tr>
<td><strong>VERY LOW WEIGHT FOR AGE</strong></td>
<td>Weight/age indicator &lt; -3 standard deviations according to the reference tables (WHO/NHCS)</td>
</tr>
<tr>
<td><strong>LOW WEIGHT FOR AGE</strong></td>
<td>Weight/age indicator &lt; -2 standard deviations according to the reference tables (WHO/NHCS)</td>
</tr>
<tr>
<td><strong>STUNTING</strong></td>
<td>Height/age indicator &lt; -3 standard deviations according to the reference tables (WHO/NHCS)</td>
</tr>
</tbody>
</table>

### GRAPH 1 / REASONS FOR ADMISSION TO THE PEDIATRIC WARD OF WOLISSO HOSPITAL DURING THE STUDY PERIOD (FROM 26-03-08 TO 25-06-08)

- 32% Severe malnutrition
- 17% Respiratory infection
- 13% Gastrointestinal infection
- 12% Malaria
- 5% Fever to be determined
- 5% Skin infection
- 3% TB
- 2% Neurological pathology
- 2% Nephropathy
- 9% Other
both acute and chronic deficiencies) equal to 64%. These patients tend to have a more negative outcome, but the smallness of our sample restricts statistical significance.

CONCLUSIONS

Our data confirm that in Wolisso hospital, too, severe acute malnutrition is the main determinant of intrahospital mortality of children. This phenomenon is well studied and, thanks to consolidated protocols, is subject to standardised hospital treatment. However, this study also shows that many admitted children present signs of chronic malnutrition (stunting and/or low weight), and have a less favourable outcome than children with good nutritional status. The impact of hospitalization on these patients is limited and intervention is restricted to treating the pathologies aggravated by malnutrition.

The spread of chronic malnutrition therefore suggests the need to prioritize public health interventions that reach the population proximally, with the objective of preventing and identifying nutritional deficiencies before they become complicated pathological conditions.

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RIISG (Italian Network for Global health teaching) recently presented a proposal to award university training credits (CFU) for Global health teaching as part of the syllabus of the Undergraduate Degree Course in Medicine; the aim being to promote the most effective, well-coordinated training on this subject and to update the current training pathway provided by health-related faculties.

The aim of the proposed study pathway, divided up into the three modules, Globalization and health, Health determinants and Health inequalities, is to respond to the new training demands that globalization poses for health professionals, and to provide optional courses that may more closely investigate subjects covered in the current study pathway. Back in 1977, Engel¹ asserted the need for a new medical training model, suggesting the move from a purely biomedical to a biopsychosocial type approach. Although this model is widely supported, even in the academic world, it has only found its way into university lecture halls to a very limited extent. Global health aims to fill these gaps by analysing disease on the basis of social determinants.

Moreover, by additionally analysing the causes of health inequalities from the point of view of social justice, Global health responds to the ethical repositioning required of health professionals from the current global and local panorama, where the gap is constantly widening between the health conditions of the various population sectors.⁵ The abundance of scientific evidence of the critical links between globalization and health is compelling health providers and institutions to address the size of its complexity and reassess the importance of ethics, equity and politics in medical practice. "Today more than ever,"³ there is a need for a new approach to medicine based on primary health care,⁴ in order to recognize the importance of socioeconomic factors for health, link health with human rights and social justice, and analyse and meet the demand for person-centred healthcare, by making essential healthcare services universally accessible.

The ever increasing relationships of dependence and interdependence among the various parts of the world also break down the barriers to health. They require multidisciplinary analysis of eco/bio/psychosocial risk factors and solutions based on integrated intersector approaches that can humanize medicine by more closely exploring the interactions between health and culture.

Illustrative of the need to modify the current predominant biomedical orientation in universities are the research and training fields covered by Global health, i.e. migration and international cooperation medicine, which become real training grounds in which to test out the need for a new health paradigm.

For all these reasons, by becoming a new, liberating educational opportunity that fosters the knowledge, knowing how to do and knowing how to be characteristic of health providers, the contribution of Global health is considered essential to the training of future health providers, and not only.

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² Osservatorio Italiano sulla Salute Globale (Oisg). InformAzione per cambiare. 4° Rapporto Oisg, Edizioni Ets, Pisa 2011.
⁴ Global Health draws on the primary health care principles embodied in the historic Alma-Ata Declaration of 1978 and adapts them to the current historic context, i.e. of globalization.
SOCIAL HEALTH DETERMINANTS: THE RIO CONFERENCE

According to the Director of WHO, globalization processes have failed to redistribute resources, leading to unprecedented levels of inequality. Besides the official Policy Declaration, the conference produced an alternative declaration, containing solid proposals for addressing the problem.

The first world Conference on the social determinants of health, held in Rio de Janeiro from 19-21 October\(^1\), was organized thanks to the efforts of Brazil, which allocated a substantial financial contribution to the event and sought to produce a summit similar to the Alma Ata Conference of 1978: a highly political stand matched by firm government commitment to follow up the recommendations contained in the Commission on Social Determinants of Health’s final report, Closing the gap in a generation. The entire organization of the event was animated by the resolute reaction of other governments and internal forces within WHO, intent on neutralizing the project’s vis politica.

The Director-General, Margaret Chan, presented a rather merciless analysis of the globalization processes which – by failing to bring benefits for all (“the tide that lifts all boats”) – have failed to redistribute resources, leading to historically unprecedented levels of inequality, underlying the economic and social insecurity of the world we live in. Lastly, referring particularly to non-communicable diseases, Margaret Chan pointed to the direct role played by multinational manufacturers of tobacco, alcohol, food and beverages. Maintaining that the only sustainable strategy is prevention, and not only in the health sector, she asserted that the current pandemic of overweight and obesity is not attributable to failure in will power of individuals but rather to failure in will power at the uppermost political echelons. Her address culminated in a strong appeal to governments: while acknowledging that multinationals and market mechanisms at times exert irresistible pressure, particularly on smaller countries, Dr. Chan provocingly wondered whether governments put people’s health before that of multinational corporations.

The conference analysed the following topics: governance for action on social determinants of health; community participation; the role of health systems in countering inequalities; global action on social determinants of health; monitoring and research; and produced the official document, “The Rio Declaration,” issued at the end of a session involving the participation of ministers and heads of state.

In the debate that followed, one interesting intervention came from David Sanders, professor emeritus at Western Cape University of Cape Town and historic member of the People’s Health Movement, who in no uncertain terms, expressed indignation – his own and that of the civil society he represented – for the lack of explicit denunciation, in the “Policy Declaration of Rio,” of the forces and powers that are largely responsible for the existing health inequalities, particularly the capitalist market system and the major transnational companies. These ideas are laid down in an alternative declaration, drawn up in cooperation with numerous civil society associations and social movements. The fact was so significant that the Brazilian Minister of Health, at the closure of the event, cited both declarations as historic results of the Conference, giving them equal standing.

There is no shortage of solid proposals in the alternative declaration, including the application of progressive taxation, the introduction of taxes on financial speculation, reinforcement of health systems within intersector public policies, able to address social determinants of health.

NOTES

HEALTH SYSTEMS AND HUMAN RESOURCES

Sub-Saharan Africa suffers heavily from the lack of human resources in the reproductive health field. The best strategies for compensating for these shortcomings are the use of community providers, task shifting, skill-oriented training and incentives for healthcare personnel.

TEXT BY / GIOVANNI PUTOTO / DOCTORS WITH AFRICA CUAMM

The epicentre of the human resources crisis for reproductive health is located in Sub-Saharan Africa. 36 African countries are below the recommended minimum threshold of 23 health providers (including doctors, nurses and midwives) per 10,000 population required to guarantee 80% of assisted deliveries.

With reference to the strategies laid down in the Kampala Declaration (2008), which are the most innovative experiences in this field? We will outline a few of the more significant ones.

COMMUNITY PROVIDERS

There is evidence, particularly in health settings with limited access to peripheral healthcare facilities, that the deployment of community providers (e.g. community health workers, traditional birth attendants) reduces maternal morbidity, and perinatal and infant mortality through delivery of effective services related to the various stages of the life cycle: fertility control, antenatal examinations, pre- and postnatal care, management of the most common paediatric pathologies. The most effective, scalable strategies are home care and women’s support groups. Ethiopia has trained and employed over 30,000 health extension workers in the health system.

TRANSFERRING TASKS TO NON-MEDICAL HEALTH PROVIDERS

Task shifting can be defined as a process of transferring or delegating care-related tasks to a health provider with a lower level of expertise. This approach was successfully implemented for the first time in HIV/AIDS management and subsequently extended to the field of obstetrics, particularly caesarean sections. Studies conducted in Ethiopia, Mali, Mozambique, Senegal and Tanzania have reported that this procedure may be performed by non medical personnel, without significant differences in terms of quality and patient safety. At present it is preferable to refer to surgical task shifting, since surgical-related mortality and morbidity at the district level covers a wide range of indications, including caesarean sections.

NOTES

Established in 1950, Doctors with Africa CUAMM was the first NGO in the healthcare field to receive recognition in Italy (pursuant to the Cooperation law of 1972) and is the largest Italian organization for the promotion and safeguard of the health of the African populations.
It implements long-term development projects, intervening with the same approach in emergency situations, with a view to ensuring quality services that are accessible to all.

HISTORY

In its 60 years’ history:
- 1,330 people have departed to work on projects: 367 of these departed on more than one occasion. The total number of departures was therefore 1,908;
- 4,330 years of service have been carried out, with a mean of 3 years per expatriate person;
- 950 students have been accommodated at the college: 640 Italians and 280 from 34 different countries;
- 279 doctors have departed from the Veneto region in almost 60 years;
- 211 hospitals have been served;
- 40 countries have benefited from intervention;
- 150 key programmes have been carried out in cooperation with the Italian Foreign Ministry and various international agencies.

IN AFRICA

Today we are in Angola, Ethiopia, Mozambique, Sierra Leone, Southern Sudan, Tanzania, Uganda with:
- 80 providers: 47 doctors, 4 paramedics, 29 administrative and logistics staff
- 37 key cooperation projects and about a hundred minor support interventions, through which the organization assists:
  • 15 hospitals
  • 25 districts (for public healthcare activities, mother-child care, training and in the fight against AIDS, tuberculosis and malaria)
  • 3 motor rehabilitation centres
  • 4 nursing schools
  • 3 universities (in Uganda, Mozambique and Ethiopia).

IN EUROPE

Doctors with Africa CUAMM has for years been actively implementing projects and building networks at European level, with the aim of building public awareness on the subject of equality of access to treatment and healthcare systems. Specifically, from 2011 to 2014 the organization has been coordinator of the European project, “Equal opportunities for health: action for development”, on which it has been working with 18 other partner organizations from 7 European countries. Universities, student associations, non governmental associations in Italy, Poland, Latvia, Bulgaria, Romania, Malta and Hungary are working together to give room and voice to training in Global health and to promote greater awareness about the relationships between health and development, both individually and collectively.

NOTICE TO READERS

Support and take part in our commitment to Africa, in one of the following ways:
- Post office current account no. 17101353 under the name of Doctors with Africa CUAMM
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- Credit card call 0039.049.8751279
- Online www.mediciconafrika.org

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HEALTH AND DEVELOPMENT offers studies, research work and documentation which are unique to the Italian editorial world. Our publication needs the support of all readers and friends of Doctors with Africa CUAMM.
EVERY YEAR IN SUB-SAHARAN AFRICA:

- 4.5 million children die before reaching five years of age, for preventable diseases that can be treated at low cost;
- 1.2 million newborn children die in the first month of life through lack of treatment;
- 265 thousand women die from pregnancy- and delivery-related problems.

Doctors with Africa CUAMM operates in:

- SIERRA LEONE
- SOUTHERN SUDAN
- ETHIOPIA
- UGANDA
- TANZANIA
- ANGOLA
- MOZAMBIQUE

where it offers treatment and help to these women and their children. Helping us do this is a silent, forgotten war.

- With 15 euros you can ensure transport by ambulance for a woman in labour.
- With 25 euros you provide for treatment to prevent HIV transmission from mother to child.
- With 40 euros you provide a mother with assisted delivery.
- With 80 euros you fund a week’s training course for a midwife.