

ICATE: a strategy for infection control awareness

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Introduction

Infection Control Awareness Through Education (ICATE) is a project promoted by the Association for World Innovation in Science and Health Education (AWISHE). AWISHE was founded in 2016 and it is a non-profit association, based in Mamarrosa, Portugal. One of its main goals is to promote the access to knowledge and training opportunities in subjects such as Science and Health through the promotion/facilitation of Collaborative Learning Communities (CLC), especially in the Cooperation countries.

Almost fifteen years ago, each and every country of the United Nations agreed to form a global action plan summarized in the Millennium Development Goals (MDGs), which provided an important framework for development, and significant progress has been made in a number of areas. The new Agenda "Transforming our world: the 2030 Agenda for sustainable development", builds on the MDGs, seeks to complete what these did not achieve, particularly in reach the most vulnerable (UN, 2015).

In order to tackle areas within the Sustainable Development Goals (SDGs), AWISHE develops workshops centered in the awareness and training in Science and Health subjects. The infection control awareness became a priority to AWISHE actions, and therefore ICATE is an educational project for children, teachers and health professionals. ICATE directly tackles three of the eight MDGs: (1) to help achieve universal primary education; (2) combating HIV/AIDS, malaria, and other diseases; and (3) to create a global partnership for development. ICATE also directly tackles two of the seventeen SDGs: (1) ensure healthy lives and promote well-being for all at all ages; and

(2) ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (UN, 2015).

Infection Control Awareness Through Education (ICATE)

Education should be understood and used as a tool for social transformation, and as a resource to achieve social, cultural and economic equality. Therefore, ICATE is a project addressed to lower-income countries and/or rural communities that brings together universities, hospitals, schools and the local communities aiming at creating CLCs. ICATE takes advantage of these CLCs to facilitate the transfer of knowledge and educational expertise from the academic media to schools, hospitals and general community, empowering the population with a set of tools, which will allow them to deal and/or participate in the infection control more pro-actively. Across African and South American countries, three major issues raise the need for awareness: HIV/AIDS, Malaria and Tuberculosis. Therefore, the main goal of ICATE project is to raise awareness about the infection control, namely in HIV/AIDS, Malaria and Tuberculosis, using as primary tool educational programs that will reinforce existing programs already implemented. In particular and in consonance with the MDGs and SDGs:

1) to help achieve universal primary education in the context of infection control and prevention of infectious diseases, a continuous educational program was developed and implemented. We believe that education is the main driver of development and empowerment that will help to achieve the other proposed goals. Therefore, the programme aims reach as many children as possible. The set of materials developed (books, ebook, presentations, flyers) functioned as open source tools to be used by teachers and/or health professionals after being trained by ICATE team. Afterwards, teachers and/or health professionals trained are able to pass on the knowledge to their students and/or the community;

2) combating HIV/AIDS, Malaria, and other diseases through a vigorous and continuous program that helps to implement activities on the field, which will promote health and the diagnose of these diseases. It is worthwhile to highlight that this program is not a set of punctual activities, but a continuous program that, when implemented by the teachers and/or health professionals trained, will take at least one year to develop all the activities proposed regarding the HIV, Malaria and Tuberculosis programs. At the end of a year of implementation, we expect to have not only trained teachers and/or health professionals in these three areas by the ICATE team, but also each child educated acting as a potential disseminator of knowledge;

3) to create a global partnership for development by creating CLC, namely with schools, universities, hospitals and other organizations, and helping them to share among each other theoretical and practical tools to enhance the infection control awareness in HIV, Malaria and

Tuberculosis. ICATE enhances the dissemination of knowledge between communities, regions and countries that join the project;

4) ensure healthy lives and promote well-being for all at all ages. The world population is getting older and we are not being able to respond in an adequate manner to this challenge. Despite the advances in biotechnology, especially in health subjects, has evolved tremendously permitting to solve health problems that until recently were not possible, the elderly continues to be more prone to develop infections. Therefore, there is a global need for the awareness to prevent infections and to create a long-term impact. This awareness has to begin with the youngsters. Increasing knowledge about health habits and engaging communities by a healthy lifestyle will have an economic impact by lowering the time of sickness and deaths in countries usually affected by infectious diseases;

5) ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The knowledge in Science evolves particularly fast, therefore a continuous updating of the recent discoveries on diagnoses, treatment or prevention of an infection is crucial to stop it to spread. The ICATE project envisions an inclusive education not only for the children, but also, and as much as possible, for the teachers, health professionals and the community. To achieve this goal, the organization of seminars and lectures, mentioned before as part of the program, given by scientist and/or medical doctors, is crucial. These professionals have a direct access to the latest developments and are therefore the perfect vector to transmit the updated information to the students and/ or the community.

ICATE project is unique and distinct from others, its programs are focused on the children, teachers and health agents, and their skills building on Health subjects, namely infection control. This project involves teachers' training and, when solicited, health agents too. This intense program, in each of the subject targeted, namely HIV, Malaria and Tuberculosis, will allow them to perform activities with the students and/or patients and general public, in order to promote a better understanding of these health problems. It is focused on passing to the different targets, through their teachers or health agents, a set of concepts that, nonetheless being basic, are crucial to prevent and control HIV, Malaria and Tuberculosis.

The use of participatory learning experiences is recognized as one of the most effective ways to help people acquire skills. Moreover, it is of utmost importance to develop programs that captivate students, in early ages, and the general public to engage them in Science. Being aware of this necessity, ICATE is a project with programs that not only envisions educate for the infection control, but also wants to increase the science capital of all the students and population involved.

Methods

To develop and implement the ICATE project, a multidisciplinary team of clinicians, biologists, microbiologists, pharmacists, anthropologists and informatics was gathered. This team provided the scientific knowledge to elaborate resources, namely books, eBooks, informative flyers, and to organize courses and workshops for children, educators and general population.

The books developed for each program of the project are the cornerstone resource from which all the other resources were created. These books are composed by 10 sessions, each one including a theoretical exposition and a practical activity. As mentioned, based on the books, power-points were also created to be used by teachers in the class room. In order to reach the community, flyers were developed, as well as quizzes. Since we are in a digital era, the contents of the books were adapted to applications that can be used in smartphones and tablets.

Results

The ICATE project was firstly applied in Portugal, to primary school level teachers and students. In this pilot edition, the ICATE team trained four teachers and their 50 students on the HIV, Malaria and Tuberculosis programs in order to validate the materials developed. The ICATE project team presented theoretical expositions of the cornerstone concepts followed by practical activities where the teachers and students could apply the concepts explained.

In June 2016, the ICATE project started to expand abroad the infection control educational map. To achieve this goal, several members of the ICATE team traveled to Brazil, more exactly to Canoas, Rio Grande do Sul, where a partnership was already established with local entities. This partnership envisioned the training of 83 teachers of different educational levels, from several municipalities of Rio Grande do Sul and São Paulo. As it occurred in Portugal, these teachers received training from the ICATE team on the HIV, Malaria and Tuberculosis programs. After being trained, these teachers not only became part of the collaborative learning community, but were also able to transmit the acquired knowledge to their students who will become potential disseminators of information on HIV, Malaria and Tuberculosis. In July 2016, ICATE was presented in Mozambique, where cooperation protocols were signed in order to implement the project in Maputo, namely with a University, a company and a non-profit organization. In November 2017, the ICATE team returned to Brazil invited by Santa Maria policymakers. This action was a joint effort of both Secretary of Education and Secretary of Health. During the 15 days of this action, 1430 teachers and health agents were trained through ICATE project. Once again, the concept of CLC was implemented and this action counted with the support of the policymakers, local university, schools and health centers. After the training, all participants replied to a questionnaire and by doing it they released their access to all the materials presented during the training.

References

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