Researchers meeting students and communities: a win-win agreement for science and society

ECIL conference

Workplace Information Literacy Special Session on Science Literac Saint-Malo (France) 18-21 September 2017

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ISS School-Work Alternating System Working Group

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CASA Project team

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The big team

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Framework: changing scenarios

The past

Researchers were concerned with the **dissemination** of scientific information only **among peers...**

Ivory towers, Publish or perish, Impact factors

Other stakeholders that would most benefit from research results were generally disregarded

Policy makers, General public, Students

The present

Scientists need communicate science beyond the scientific community

Citizens become part and parcel of the knowledge dissemination cycle, widely facilitated by digital technologies

\rightarrow \rightarrow \rightarrow Responsible Research and Innovation

A new challenge Responsible Research and Innovation (RRI)



- an approach that anticipates and assesses potential implications and societal expectations, with the aim to foster the design of inclusive and sustainable research and innovation
- all societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) are involved to work together in order to better align both the process and outcomes of research and innovation with the values, needs and expectations of society

Objectives of the presentation



show how researchers

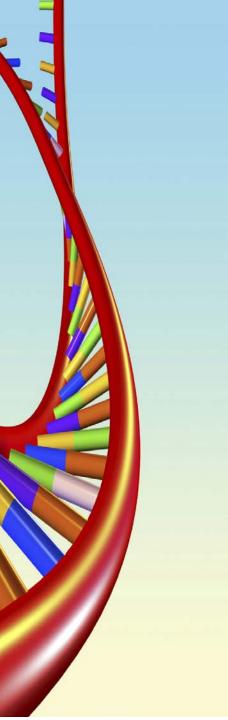
can contribute to fill the gap between science and society by **communicating science outside the scientific community**

→ use strategies, tools and languages that can be easily understood by lay people



demonstrate the value

of a **multidisciplinary approach** to scientific research which needs integrate scientific and social-cultural knowledge for a win-win agreement between science and society



Basic concepts....

- Take **responsibility** to communicate science
- Focus on a **holistic & sustainable approach** to address new challenges in science literacy
- Foster more **accessible**, **better adapted** scientific information dissemination systems

The key message

it is important to stimulate researchers to develop science communication initiatives addressed to different stakeholders as an integral part of their research commitment

How?

A selection of initiatives to foster science literacy

Examples are provided to show how researchers can be engaged on different grounds Initiatives promoted by National Institute of Health (ISS) within national and international partnerships

Extensive data reported for

- 3 ongoing projects
- School-work alternating system (Italy)
- CASA project (international)
- E-Bug project (international)

Istituto Superiore di Sanità

Main governmental research body for public health in Italy (about 2000 people)

Promotion and protection of national and international public health through research, surveillance, regulation, control, prevention, **COMMUNICATION**, counselling and training

SVPERIO,

MISSION

and disseminates it to different stakeholders

HEALTH FOR ALL

Ask researchers to...

engage in writing books for students and teachers...

ISS has been publishing handbooks for schools since 2001



Ask researchers to...

take part in workshops and meetings addressed to students & teachers



Since **2010** ISS has been organizing workshops *Tuesday School & health* on health literacy addressed to school teachers

18 workshops, 40 researchers , 80 teachers

Conferences and meetings addressed to school students

20 researchers, 400 students



Ask researchers to take part in exhibitions for the general public



ISS at Science Pic Nic Warsaw, 2011, 2014

Games to involve the general public on the importance of correct life styles

Mediterranean diet, physical excercise, etc.

THE LANGUAGE OF MEDICINE: Science, Practice and Academia. Univ. Bergamo, 19-21 June, 2014

Festival of scientific documetary



In 2014, ISS entered a network of academic and research institutions to promote scientific culture

DOCSCIENT

Workshops and Labs on drinkable water

Ask researchers

to take part in ... Science Festivals

In **2015** and **2016, ISS** took part in **Genoa International Science Festival** and organised Interactive initiatives in current scientific issues

8 paths54 researchers300 students



European Researchers' Night

EC-RRI project to discover science,meet researchers and have fun!ISS took part in this initiative in 2016 and 2017

Over 50 events (conferences guided tours, exhibitions) involving over 1.000 people and 250 researchers





School-work alternating system

Italian Law 107/2015 "The good school"

Innovative teaching methodology requiring high school students to spend a period of time in a WOrkplace to contribute orienting them towards responsible future choices

It envisages **specific agreements** between schools and private or public bodies, including research institutes to carry on **school-work alternating programs**

ISS participated in such programs since 2016

Pilot project → 4 schools

School-work alternating system

ISS project

Multidisciplinary approach

Red thred scientific method

Communicate science... outside the scientific arena

Pilot project started in 2015...

School-work alternating system

Which advantages?

Integration and aggregation

Inside and outside the institution

allows to

- promote new value-centred culture
- maximise researchers training ability by investing in a training alliance addressed to school students

B. W

E=mc

- improve relationships within the geographical area by creating new values and awareness on research institutes
- increase awareness on researchers social responsibility

ISS: reference point for school-work alternating system

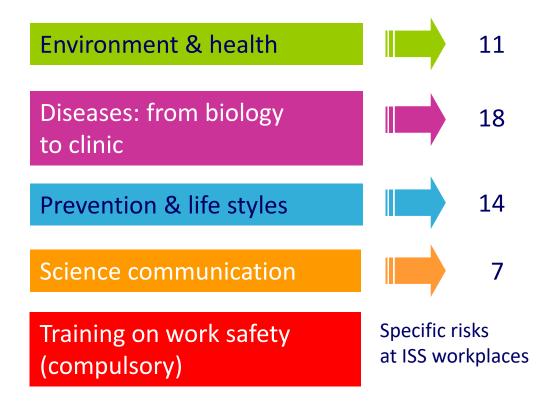
Active role to updating schools on:

- health issues
- health-related placement opportunities and challenges



ISS scientific paths in School-work WAS





Controllo della qualità microbiologica **AS9** • e virologica delle acque



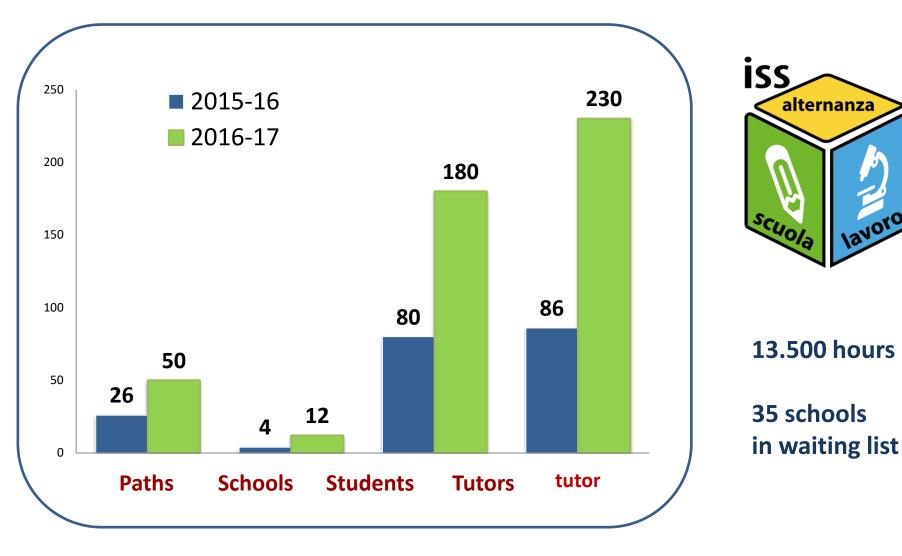


Risultati del percorso

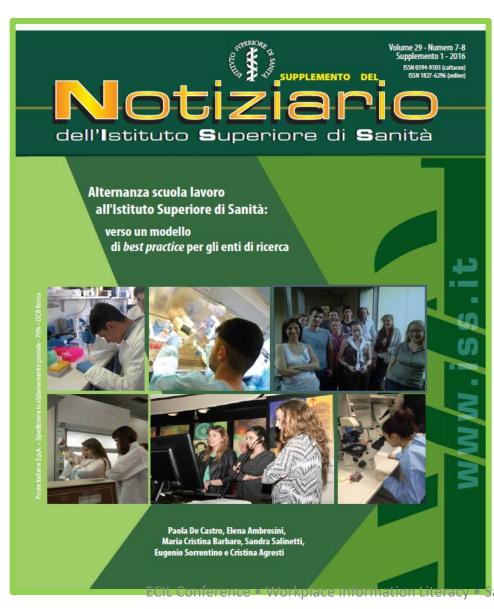
Acquisizione di competenze teorico-pratiche di base per la valutazione del rischio microbiologico e virologico nelle acque ed elaborazione di pieghevoli a carattere informativo.



Figures of the ISS Alternating program



ISS guidelines – 2016 (produced after the pilot stage)



How the system works

Recommended Organization Stage 1. Preparatory activity

Stage 2. Implementation (50 hours) **Stage 3.** Evaluation and dissemination

best-practice for research institutes

Voices (Students, teachers, tutors) Each stage is described in detail

Sample models

http://www.iss.it/binary/publ/cont/Alternanza ISS Best practice online.pdf aint Malo, France • 18-21 September 2017



More in Italian....



Documents ASL ISS

http://www.iss.it/publ/index.php?lang=1&id=2984&tipo=15

Website realized by students

Global health path including tutors' presentations www.globalhealthgroup.net/asl/

Videos realized by students

https://youtu.be/jDlJwwy1cBM

https://www.diregiovani.it/comunica/supera-te-stesso-guida-verso-ilfuturo-ragazzi-in-alternanza-alliis/

CASA Project

www.casaproject.info





The first nation to be involved in the CASA – project is Ethiopia also by virtue of the historical relations between Italy and that nation. The Italian contribution has, indeed, proved one of the most significant in the ambit of the fight against poverty in Ethiopia, involving sectors of crucial importance, such as, education, energy and health services organization.

Communicable diseases (CDs), including tuberculosis (TB), malaria, HIV/AIDS, respiratory infections, diarrheal diseases and nutritional deficiencies contribute to the high disease burden in Ethiopia. HIV/AIDS is still one of the main health challenges to be faced.

Although HIV prevalence is not very high, and the country recently experienced a major reduction in new HIV infections, it still has a large number of people living with HIV (PLWH): in 2014 (latest estimated data) the adult prevalence was 1.2 % [1.0%-1.5%], with an estimated 730,000 [600,000-970,000] PLHIV.

Project Ownership:THB

CASA PROJECT OBJECTIVE

Improve the quality of care of patients

with HIV and related co-infections

in Tigray Region (Ethiopia) through

Research and training

Training focused on

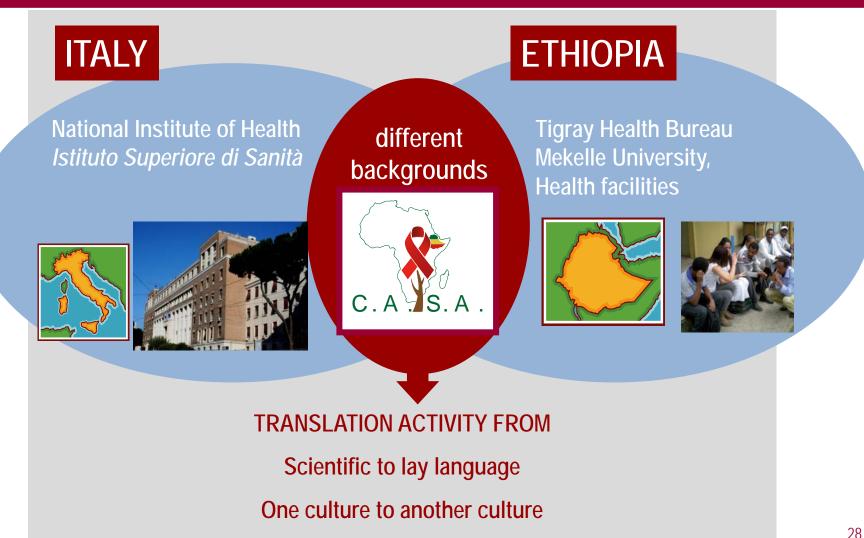
- Communication
- Clinical aspects on HIV/AIDS

Addressed mainly to

- Health workers (CBO)
- Nurses

Perfect example to show how improved communication and science literacy can contribute to improve health outcomes

TEACHING & LEARNING are strictly connected



One language to another language

| CASA Operational research | | | |
|---|--------------------------------|---|---|
| DE ONE TENTH ANNIVERSARY | Plos One, 2 | 015 | C.A.S.A. |
| Cohort Study Raffaella Bucciardini 🖾, Vincenzo Fragola, Teshome Abega | Prospective Obse | | 2017 - Published by group.bmj.com Research |
| Micheal Berhe, Katherina Pugliese, Andrea Binelli, Paola De [],CASA-project Health Facilities [view all] Published: September 4, 2015 • https://doi.org/10.1371/jour | e Castro, BMJ Global Health | Dal Health Predictors of attrition from care at 2 years in a prospective cohort of HIV- infected adults in Tigray, Ethiopia | |
| BMJ Global Health | ı, 2017 | Raffaella Bucciardini, ¹ Vincenzo Frag Atakilt Halifom, ³ Eskedar Tadesse, ² I Luca Fucili, ¹ Massimiliano Di Gregor Roberta Terlizzi, ¹ Paola Tatarelli, ⁴ And Michela Campagnoli, ¹ Stefano Vella, | io, ¹ Marco Mirra, ¹ Paola De Castro, ¹ drea Binelli, ¹ Teame Zegeye, ³ |
| ECIL Conference | Norkplace information | Literacy • Saint Malo, France • 18-2 | 1 September 2017 |

CASA training strategy

2014-2015





- study of the local scenario
- \rightarrow informal meetings, focus groups, workshops to
 - ightarrow analyse information needs of target groups
 - \rightarrow define ad hoc training programs

2016

2

training program **implementation** continuous **adjustments** according to feedback



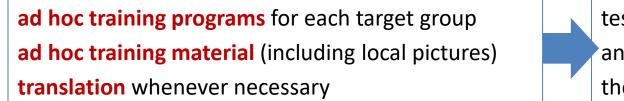
evaluation of results achieved consideration of sustainability issues



Details of the training strategy



All decisions taken in in accordance with ISS, THB and MU



tested before implementation and then adjusted according to the feedback received

a facilitator was appointed for training implementation at local level in collaboration with the local coordinator and data managers

written and oral examinations

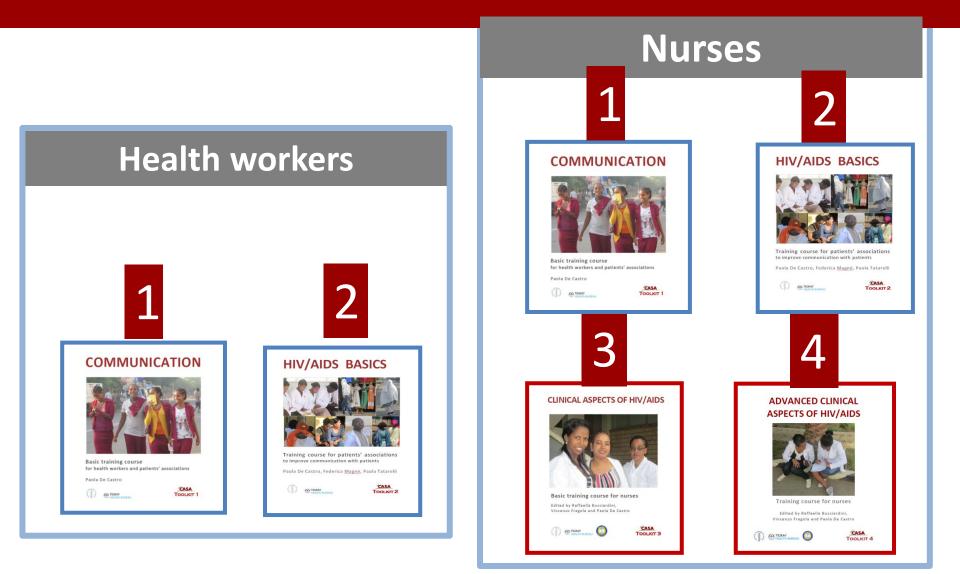
workshops and informal meetings

distribute booklets in hospitals and HFs , monitor program, collect feedback

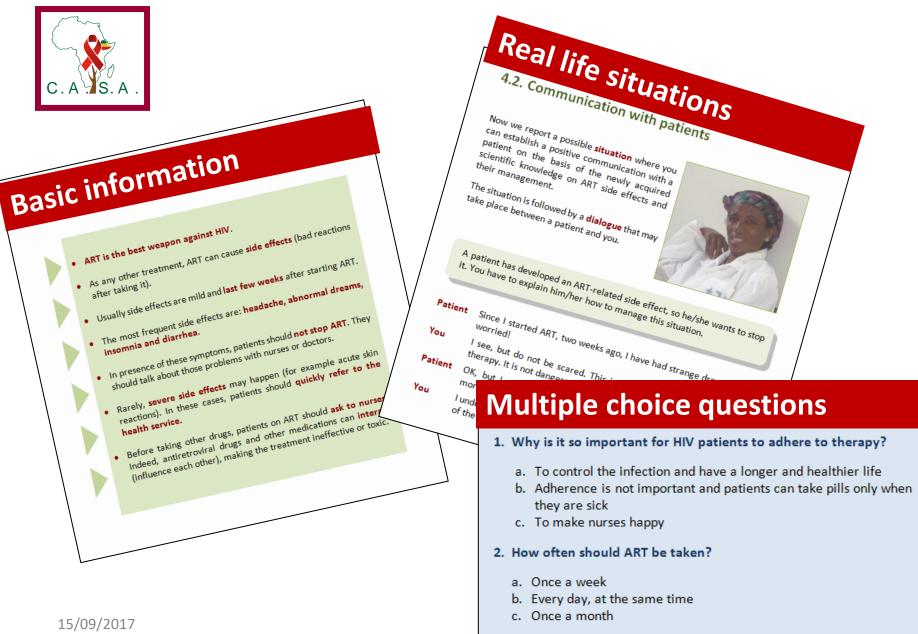
Overwhole evaluation and certificates

Clinical issues and topics of general interest

Teaching material: CASA toolkits



USER- FRIENDLY MATERIAL: Examples From Toolkit 2



Workshop • Mekelle, January 28, 2017

15/09/2010 • Ethiopia and Partners: the Response to HIV/AIDS • Addis Abeba, January 25, 2017

Two booklets were translated in Tigrinya

Translation will help to fully understand and use the contents of the booklets

Translations in Tigrinya

CASA Toolkit 1



CASA Toolkit 2





USER- FRIENDLY MATERIAL From Toolkit 1

All lessons included

- Take home messages
- Suggested tasks for discussion
- Pictures from local settings

2.6. Facial expressions and tone of the voice

We can express the same concept, using the same words, but with a different facial expression or tone of the voice which may completely change the meaning and feeling of what we are saying. The tone of the voice as well as the content of speech or other expressions of the body language can provide useful clues for the individual emotional status. For example, lower self-esteem may be reflected by hesitancy in the voice; higher self-esteem shows major command of the voice and clarity of speech.



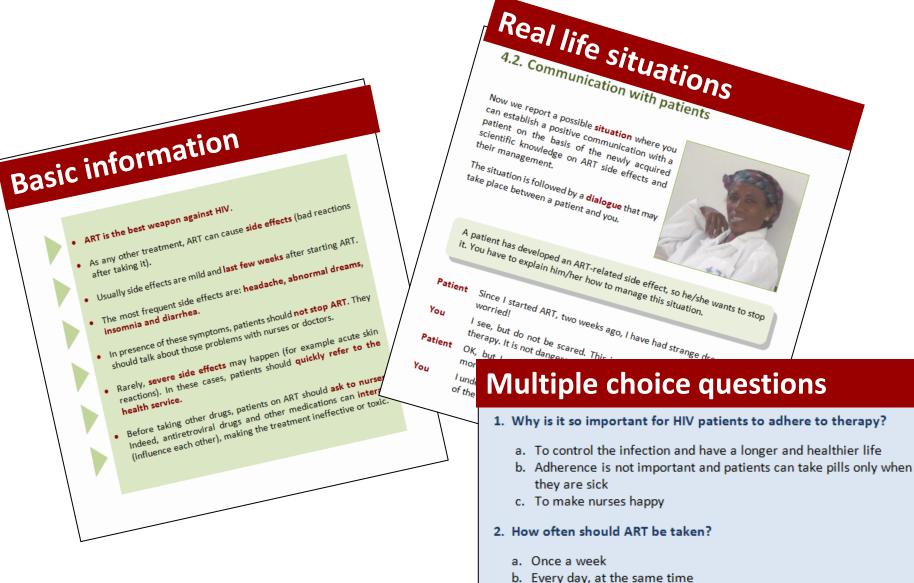
TAKE HOME MESSAGES FROM LESSON 2

Basic knowledge on communication

- Communication involves different activities, not only speaking
- Effective communication involves listening to the other person
- Non-verbal communication provides useful feedback to evaluate the effectiveness of communication



USER- FRIENDLY MATERIAL: Examples From Toolkit 2



15/09/2017 Workshop • Ethiopia and Partners: the Response to HIV/AIDS • Addis Abeba, January 25, 2017

- b. Every day, at the san
- c. Once a month



ional training material

FOR NURSES ONLY

- Selected articles on HIV
- Videos of the lessons of Toolkit 3 & 4 lessons



available on USB to complete training





6 months for both Nurses and CHWs

CHW→ Toolkit 1 and 2 + workshops, informal meetings

Nurses \rightarrow Toolkit 1, 2, 3, 4

+ additional reading of scientific articles

+ workshops and informal meetings

Training started in April 2016 (workshop) Terminated in October 2016 (workshop)



port to training

Participants in training activities received continuous support from ISS and local staff



- A facilitator (contact person between ISS and course participants) collected questions and suggestions arising during the course implementation.
- **ISS provided answers** to course participants through the facilitator
- **Continuous contacts** between ISS staff and facilitator contributed to the success of the training program



aining certificates



Certificate of Accomplishment for those who passed the exam answered correctly 70% of questions **Certificate of Attendance** for all those who took part in training





aining figures

Community Health Workers

April-October 2016

| ALL PARTICIPANTS | 49 | |
|------------------------------|-----------|-----|
| Completing the course | | 42 |
| Passing written exanination | | 29 |
| Admitted to oral examination | | 14* |
| FINAL SELECTION | | 14 |



* Only participants with highest scores were admitted

Exams at Mekelle, October 2016



Training figures

Nurses

April-October 2016

| ALL PARTICIPANTS | 73 | |
|------------------------------|----|-------------|
| Completing the course | | 50 |
| Passing written exanination | | 48 |
| Admitted to oral examination | | 45 * |
| FINAL SELECTION | | 21 |



Exams at Mekelle, October 2016

* Only participants with highest scores were admitted



ASA training 2015-16



| Participants | CHW | % | Nurses | % | TOTAL % | |
|--------------------------|-----|------|--------|------|---------|------|
| Registered for training | 49 | | 73 | | 122 | |
| Completing the training | 42 | 85.7 | 50 | 68.5 | 92 | 75.4 |
| Passing the written exam | 29 | 59.2 | 48 | 65.8 | 77 | 63.1 |
| Admitted to oral exam | 14 | 28.6 | 45 | 61.6 | 59 | 48.4 |
| Passing the final exam | 14 | 28.6 | 21 | 27.4 | 34 | 27.9 |

A very selective process to focus on future trainers

From training to intervention

CHW WERE ASSIGNED SPECIFIC TASKS

closely associated with what they learned about communication & clinical aspects of HIV



1) Go and Search patients missing to follow up

(based on a list (paper format) received by case managers on Monday, each week)

2) Report on the same paper form why patients did not show (Return the same. the duly filled, format, to case managers, on Friday, each week)



www.casaproject.info

Your Home for Global Health Research and Training

MEMO CARD for Patients' Associations

Supporting CHW intervention activity

Memo cards

were designed to help CHW memorize their tasks



Format to trace missing patients



Patients missing for more than 1 month from next visit date ካሳ ፕሮጄክት ከቀጠሯቸው ከ አንድ ወር በላይ ለቀሩ ታካሚወች መፈለጊያ ፎርም

| 1 | 2 | | 4 | 5 | 6 | 7 | 8 | 9 | | 11 | 12 |
|---------------------------------|---|------------------------|---------|----------------------------|---|--|---|---|---|--|--|
| S.N <u>+6</u> <u>+</u> TC | Patient card number <u>hC& #nC</u> | Patient Name A | Address | Phone number ስልክ ቀጥር | Date of last visit <u>Accard 1H</u> <u>Recard 1H</u> | Date of next visit <u>RtmC t</u> ? | Did you trace the patient ? Write: Yes or No 01003 t132ta? | How did you trace the patient? Write: - By phone - Face to face - Other people | If you traced the patient, specify its status Write: - Alive - Dead - Unknown <u>freat herry</u> Trac? hereit? | If the patient has been traced, whi did he/she tell you? 1. He/She will return to the HF (write Yes) 2. He/She will NO return to the HF (write No) 1=000? b? | at told you tha he/she would <u>not</u> <u>return</u> to th HF, why? |
| | Patie | nts data J in by Ca | ase | | | | | | vers to be | 1VN | |
| | | y in Dy nagers | | | | | | - Alis - prov aft | vers to be vided by CH er tracing atients | | |
| | | | | | | | | - pa | atients | | |

Date of extraction of this patient list (indicate both): Ethiopian calendar:

European calendar:



Literacy • Saint Malo, France • 18-21 September 2017

E-BUG

The ISS is partner of the project currently led by Public Health England, involving 28 countries.

Aim

to *educate* children and young people about correct use of antibiotics, microbiology, hygiene and the spread, treatment and prevention of disease.

Benefit

Being part of an international network permits to *share* experiences and *grow* together. EAHIL Conference Rome, Italy, 11-13 June 2014

a web tool to empower students on antibiotic use

Paola De Castro, Maria Cristina Barbaro, Sandra Salinetti (Publishing Unit) Annamaria Carinci, Annalisa Pantosti (Dept. of Infectious, Parasitic and Immune-Mediated Diseases) Istituto Superiore di Sanità • Rome, Italy

Introduction

Health information literacy is pivotal to promote life skills and healthy styles among different target audiences. Librarians, editors and research scientists can develop collaborative initiatives addressed to teachers and school children to improve awareness on health information literacy and contribute to create informed and empowered citizens. In this context, the European project e-Bug, developed by the Health Protection Agency in the UK, represents an interesting case. It provides school education resources to face antimicrobial resistance, an emerging key issue in public health.

Methods

Educational packs on microbes, hygiene, spread and prevention of infections, together with a website with interactive games allow students to learn about responsible antibiotic use while having fun. The Istituto Superiore di Sanità, as Italian e-Bug partner, translated and adapted all web material to fit contents to the Italian context and disseminated e-Bug project in Italy throuch participation in:

- conferences
- organization of meetings
- publications
- production of leafle.

Objectives

-Bug

European

Educational resource on microbes, infections, vaccines, and prudent

 Amprove young people's understanding of the importance of responsible antibiotic use, thus helping society as a whole.

Offer school librarians sound and reliable information to help students in their study on microbes, hygiene, spread and prevention of infections.

Conclusion

www.e-bud.e

Now e-Bug project consists of a consortium of 28 countries thus guaranteeing a wide diffusion throughout Europe. During 2015⁹Italian e-Bug website had more than 3600 visits.

E-BUG, a game to empower students on prudent use of antibiotics (microbiology)



OUR COMMITMENT Create, translate and adapt scientific contents in a different context

e-Bug www.e-bug.eu

Since 2009 ISS translates and adjusts avalialble material to the Italian context

Website addressed to

- students
- teachers
- communities



Use the links on the left to access and download each section of the teaching pack individually or click on the appropriate icon below to download the whole pack. This may take a few minutes.

Games

Training England

If preferred, many of the student handouts are also available as downloadable whiteboard presentations to limit the amount of

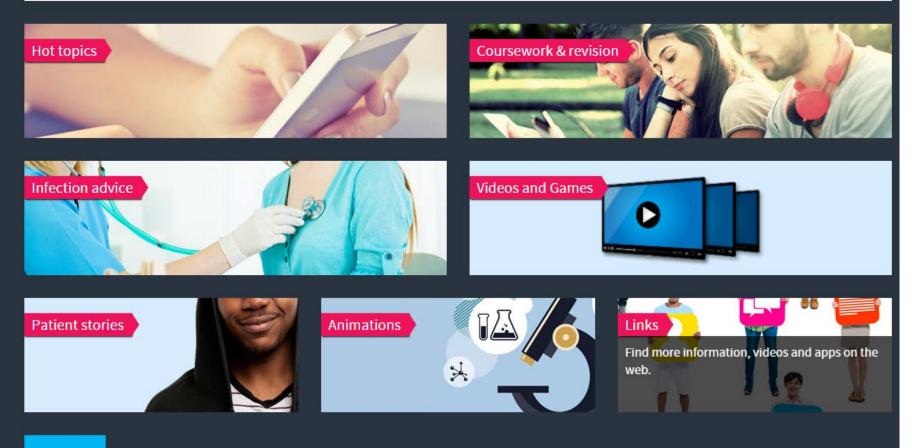
Visit the student site to see the range of interactive activities and revision guides accessible to students at home. All of the online resources have been designed to cover the same learning outcomes as the pack, and can be used to assist learning in a fun and interactive way.

This educational pack and support material supports the majority of recommendations for schools, educational and residential settings for children and young people in the NICE guideline on antimicrobial

National Institute for Health and Care Excellence January 2017



Welcome to <u>e-Bug</u>! Navigate through the sections to find advice, hot topics, animations and videos covering antibiotics, vaccinations and the spread of infection.





from Department & Publishing Unit

In the past,

dissemination

and attending

and workshops.

conferences

was carried out mainly

through publications,

a

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Italy has been involved in the project since its very beginning. The Istituto Superiore di Sanità (ISS, Italian National Institute of Health) became partner in 2010.

Activity

We are translating web material from English into Italian. In 2015 we carried out informal dissemination. We are now engaged in: evaluating the new young adults resources; promoting the website through links to other projects on antimicrobial resistance (e.g. the Euromed Project, financed by the Italian Ministry of Health); organizing training events for national and international partners.

Major challenges

The translation of original English texts has to consider the various scenarios where e-Bug material will be used to fit different socio-cultural realities.

Short term plans

In the framework of the new Italian school legislation (2015) we will host high school students at the work place to introduce them to e-Bug and antimicrobial resistance.

> We would like to establish a closer connection with Italian Regional authorities (in charge of healthcare) and the National educational authorities.

We would like to launch a survey among e-Bug partners o investigate cultural differences in the translation process and in the use of e-Bug material in different contexts.

Requirements for the future

- strengthen the Italian team and network of collaboration
- find new resources to allow a better implementation of e-Bug activities

Challenges

- Volunteer work
- Lack of resources
- Need of institutional support •
- **Teachers' involvement**
- **Adaptation**

 \rightarrow RRI

ISS staff works on a voluntary basis, it is often difficult to regularly carry on the project activity (no funding is allocated for e-Bug).

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FINAL CONSIDERATIONS

It is important to create **awareness** on the role of science literacy in society and **engage researchers** to commit in science communication addressing **different stakeholders**

This commitment will contribute to create a **more equitable world** where everybody can have access and properly use available information and services

THANK YOU!

paola.decastro@iss.it