

## Open access to research results within the Italian National Health Service institutions: still or troubled waters?

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Implementing the open access (OA) approach to research findings has proven to be fundamental for spreading valuable scientific output worldwide, particularly in the public health domain. Mandatory policies, concerning the deposit of final peer-reviewed articles into digital archives which are Open Archives Initiative (OAI)-compliant, have been established by both research institutions and funding agencies at a national and international level.

A survey was recently carried out - in early 2016 - to investigate the current scenario of OA policies and initiatives undertaken by Italian research institutes.

An online questionnaire, made available on SurveyMonkey, was set up to gather information regarding the move towards open access. In particular, the institutions were asked to declare whether they had established an open access policy, whether they were publishing an open access official journal, and running or participating in an OA repository. Other aspects were also considered relating to the percentage of open-access articles published in 2014 by the internal research staff. The questionnaire was distributed through Bibliosan, the library network of 60 Italian health research institutions.

Data relating to feedback to the questionnaire were analysed in order to depict the state of the art in adopting an open access paradigm by the research institutions surveyed. The results also included comments concerning cost sustainability with reference to coverage of ACP (Article Publication Charges) required by most OA journals.

*Key words:* Open access publishing; Health information management; Academies and Institutes; Surveys and questionnaires; Italy

### Introduction

The open access (OA) approach to research results is constantly reshaping the scholarly communication scenario worldwide in a way that, nowadays, seems to hold profound sway over scientists' careers and their publishing habits in every disciplinary domain.

An increasingly emerging issue, in particular, is the growing push from funders in favour of such openness, as a result of an increasing demand for OA publishing and data sharing in line with the principles of Open Science (1).

Besides traditional funders in both Europe and United States (e.g. Wellcome Trust in the UK and NIH in the US) requiring scientists to publish OA articles as a condition of funding, along with the initiatives by the European Commission for reimbursing OA publication fees (2), new pressure for open access comes from other stakeholders, such as private enterprises (3).

This increasing openness attitude is likely to generate the adoption of OA policies at a national level,

first of all in countries such as Italy where efforts are still needed to set up protocols and digital infrastructures such as open institutional repositories for allowing large scale of publication and data sharing.

Within this flourishing top-down culture (funder mandates) inclined to free access to research outcomes, scientists, for their part, need to be given instruments concerning how to cope in practice with the OA publishing model. Surveys devoted to domain-specific communities of scientists seem to be a valuable means to investigate the real impact of OA strategies among authors of scientific papers (3).

### **OA state of the art in Italy**

A milestone of Italian advocacy in favour of OA was set in a specific section of a recent law regarding the appreciation and promotion of culture, whereby the principle of open access was recognised by stating that at least fifty percent of scientific publications derived from publicly financed studies must have free and immediate open access (Italian law, 112/2013) (4). In this regard, research institutions are required to adopt policies intended to promote open access to scientific outcomes. The Italian Government should foster a paradigm shift within the scientific community by leading policy decision makers of research institutions to enforce the law and to mandate the self-archiving of publicly-funded final peer-reviewed articles into OAI (Open Access Initiative)-compliant digital archives for immediate and permanent access.

In particular, this principle of depositing articles derived from grant-funded research was also reaffirmed by the recommendations of the Finch Report accepted by the UK Government, which points out that *'the results of research that has been publicly funded should be freely accessible in the public domain'* (5).

A significant position in this regard was adopted by the Conference of Chancellors of Italian Universities (Conferenza dei Rettori delle Università Italiane, CRUI), on the occasion of the tenth anniversary of the Messina Declaration, when specific emphasis was devoted to the development of open access strategies, and representatives of Italian Universities and Research centres working in the areas of Science, Humanities and Social Sciences signed the Messina Open Access Road Map 2014-2018 (6).

### **OA implementation in the public health sector in Italy**

As far as research in the biomedical field is concerned, a major role is played in Italy by Bibliosan, the Italian Research Libraries Network, a collaborative initiative conceived to spread health information and services and promoted by the Italian Ministry of Health.

Real support to those working in the field of biomedical research and healthcare mainly in terms of sharing research data, is offered by Bibliosan 2.0, designed by the library staff of the Istituto Superiore di Sanità (ISS, National Institute of Health in Italy) to enhance the knowledge and adoption of web 2.0 tools among the vast community of scientists and information experts of the Italian research institutions joining the Bibliosan network.

The ISS recently reaffirmed its commitment to OA principles, established in its institutional policy for open access to scientific publications since 2008 (7), by signing the Messina Open Access Road Map thus marking, de facto, the subscription of the biomedical research community to the OA approach to science.

More specifically, the institutional repository OAI-compliant DSpace ISS (<http://dspace.iss.it/dspace/>), developed by the ISS was also conceived, in accordance with ISS

policy, to collect the entire output of literature produced by Bibliosan institutions with a view to creating a national website portal of scientific resources in the biomedical field. The real challenge is now that of maintaining and developing such a multifaceted tool involving a blend of technological and managerial issues.

In order to achieve a global, current vision of the status of OA in Italy among the biomedical research institutions, a questionnaire was set up and administered to all Bibliosan member bodies in early March 2016.

## Survey

The survey was designed to investigate the institutional awareness of the OA culture and strategies by the Italian National Health Service research institutes, implying free availability of research results when derived from publicly-funded research.

Within this objective, the questionnaire was mainly intended to 1) establish whether or not there existed an institutional policy for OA to scientific publications; 2) find out if an OA peer-reviewed journal was published; 3) quantify the number of papers which appeared in 2014 in peer-reviewed journals with an impact factor, with specific reference to OA papers.

Respondents were required to identify OA journals by consulting the Directory of open access journals (DOAJ).

## Methods

The research framework of the Italian National Health Service (Servizio Sanitario Nazionale, SSN) consists of 60 public or private institutions covering all aspects of human and environmental health. According to their institutional profile and tasks these bodies can be grouped into three categories: 46 *Istituti di Ricovero e Cura a Carattere Scientifico - IRCCS* (Scientific Institutes for Research, Hospitalization and Health Care), 10 *Istituti Zooprofilattici Sperimentali - IZS* (Veterinary Epidemiology Research Institutes); 4 other institutions acting in the field of public health, namely the *Istituto Superiore di Sanità - ISS* (National Institute of Health) and the *Agenzia Italiana del Farmaco - AIFA* (Italian Medicines Agency), the *Agenzia Servizi sanitari regionali - AGENAS* (Regional Health Services Agency) and the *Istituto Nazionale Assicurazioni Infortuni del Lavoro. Ricerca - INAIL* (National Institute for Insurance against Accidents at Work. Research).

A link to an online questionnaire was e-mailed to all mentioned institutions included in the Bibliosan network, through SurveyMonkey. The survey was open from 29 February to 4 April 2016. Respondents to the online questionnaire were 26 IRCCS, 4 IZS and 2 pertaining to the category "other".

## Results

The respondent institutions were 32. All responses collected were made available on Google Forms, in order to better analyse data in a free-of-charge modality.

### 1. OA policy

As far as the establishment of a policy regarding open access to scientific publications, only 2 institutions (6,2%) out of 32 declared they issue their own; in both cases the institutional policy was issued through an internal decree; just one institute reported a URL to visualize the document. One institution among the respondents declared that it is going to implement an OA policy, while one other specified that it has a policy in place to prevent malpractice arising from predatory OA publishers.

## 2. Publication of a peer-reviewed official journal

A total of 23 out of 32 respondents declared they do not publish any official peer-reviewed journal; 9 responded they publish such a journal; 7 specified that their official journal was open access while 2 had subscription-based journals (Fig. 1). Official journals not requiring article publication charges (APC) totalled 11, while 3 required charges; among the latter, one asked for charges according to certain types of contributions (research articles, reviews).

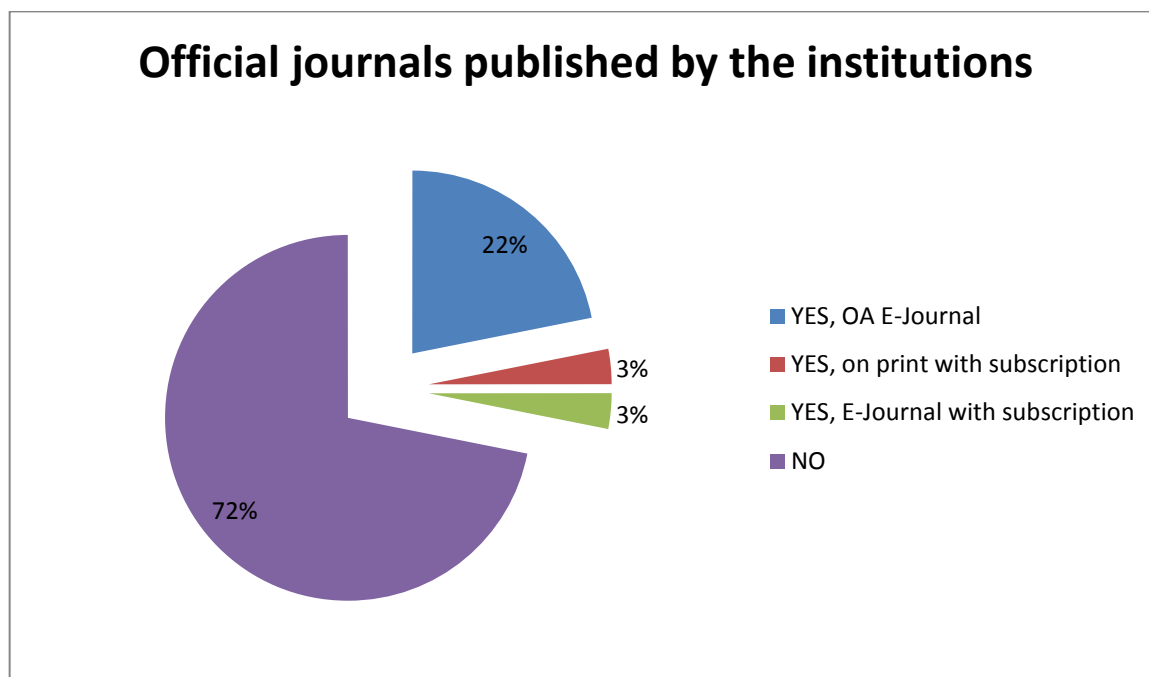


Fig.1 Official journals published by the institutions respondents 32 out of 32

Among those who declared payment of APC, one quantified the amount at 1600 Euro + VAT, while the remaining two indicated in one case that charges were required just for color figures, print and extra-page articles, and, in the other case, that authors were allowed to pay according to the business model “pay what you can afford” (<http://ecancer.org/journal/charges.php>).

## 3. OA articles published by institutes on journals with an impact factor (IF)

Institutions surveyed were asked to provide data referring to 2014, the data for 2015, not having yet been recorded. All responders, except one, stated the number of articles which appeared in 2014 in journals with an IF.

The global number of articles is 7776 and refers to 31 respondents; among these respondents, those who indicated the amount of OA journals numbered only 15 institutions out of 32, for a total of 4146 articles, of which 806 (19.4 %) resulted as OA articles. In addition, just 7 institutions out of 32 revealed the articles (84, equivalent to 7.6% of 1111 total articles) in hybrid journals on payment of APC by authors (Fig. 2).

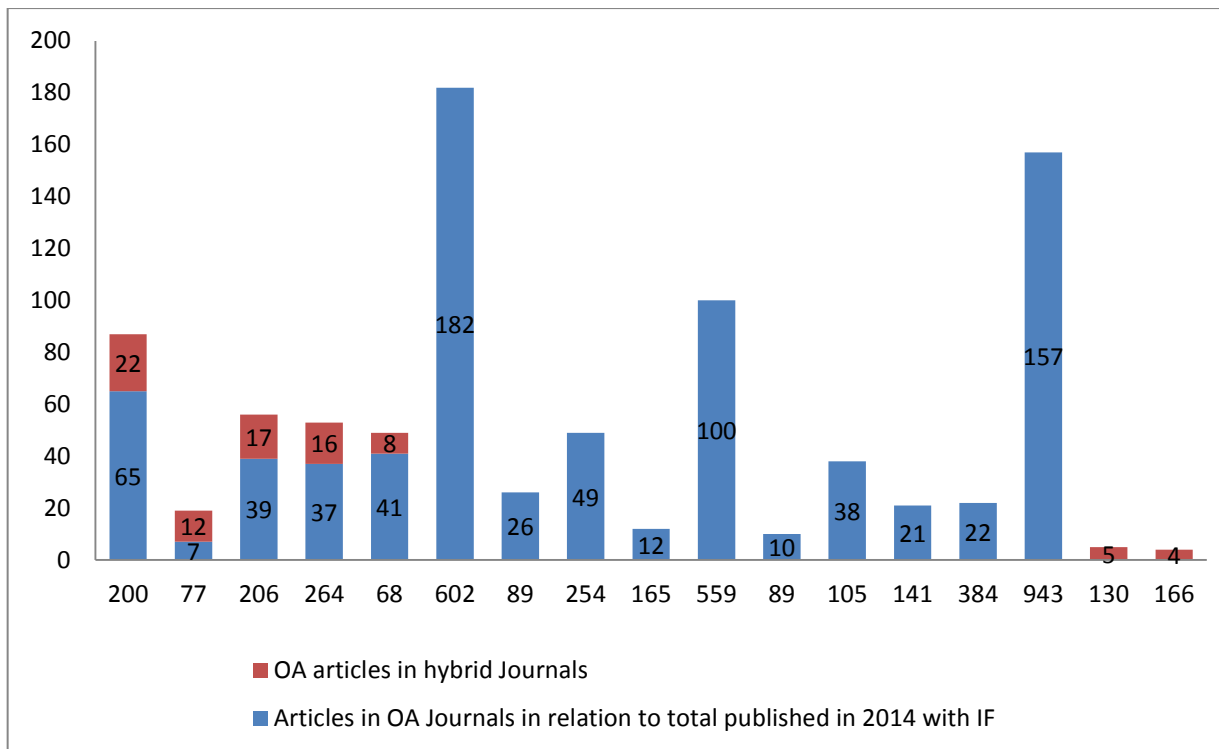


Fig. 2 Articles published in OA by 17 institutions out of 32

#### 4. Availability of published articles

Another indicator about which the participants in was asked, concerned the level of accessibility to their publications in journals with an IF. All 32 respondents answered this section: 10 enter their articles with IF only in the Italian Ministry of Health workflow, which is not publicly accessible; besides recording on the workflow, which is mandatory for Italian research institutions, 16 upload their articles on internal platforms with access restricted to those responsible for collecting the publications; 3 publish their list of publications on the Intranet, 8 make the list accessible on the Web; 3 manage their own open archive; no institutions participate in an external open archive.

#### Comments and conclusions

Italian biomedical research institutions were asked to describe the internal scenario of publishing practice related to the principle of open access to research results.

Data resulting from the survey show that many institutions are not aware of the crucial relevance of adopting an OA policy to promote and monitor their own literary production. In particular, it seems that most of them are not fully equipped to calculate the percentage of OA papers published per year. Moreover, major efforts should be spent on widening the visibility of the literature output of the institutions. Limited circulation through internal platforms does not allow sharing and re-use of research data among scientists.

Subscription costs should also be taken into account by stakeholders when evaluating the sustainability of traditional models of scientific communication. In this regard, the Bibliosan network devotes more than 3 million Euro per year to acquiring shared resources. Further money is spent by each institution to ensure additional information resources according to their specific needs. In addition, costs relating to the OA publishing model asking authors/institutions for an APC payment should be considered by decision makers in order to balance economic resources.

A desirable scenario in Italy would be the enforcement of the recent law regulating open access in the scientific domain. But, as pointed out by Moscon *'The recognition by legislators of the importance of OA is a development of great significance, but it is not sufficient. The success of OA depends on a radical change of values and customs of the scientific community, as well as on necessary economic, organizational and educational investments'* (8).

#### *Further development of the survey*

The online questionnaire will be re-opened to allow the gathering of further data from other Italian respondents. Furthermore, as it was conceived as a flexible tool licensed under a CC BY formula, it can be integrated or adapted according to specific needs of colleagues, in other European countries, interested in performing a similar analysis in their professional settings. This will help to depict the state of the art of OA policies adopted by health research institutions in Europe. The link to the English version of the Questionnaire in Google Forms is:

<<https://docs.google.com/forms/d/1cPKr4O91XNBVdnI2E4r4jxmthVBoEnggFbc3aSzu0zo/prefill>>

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