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The scientific activity carried out by the EOC Services in 2016 resulted in 320 scientific publications.

Publications in 2016

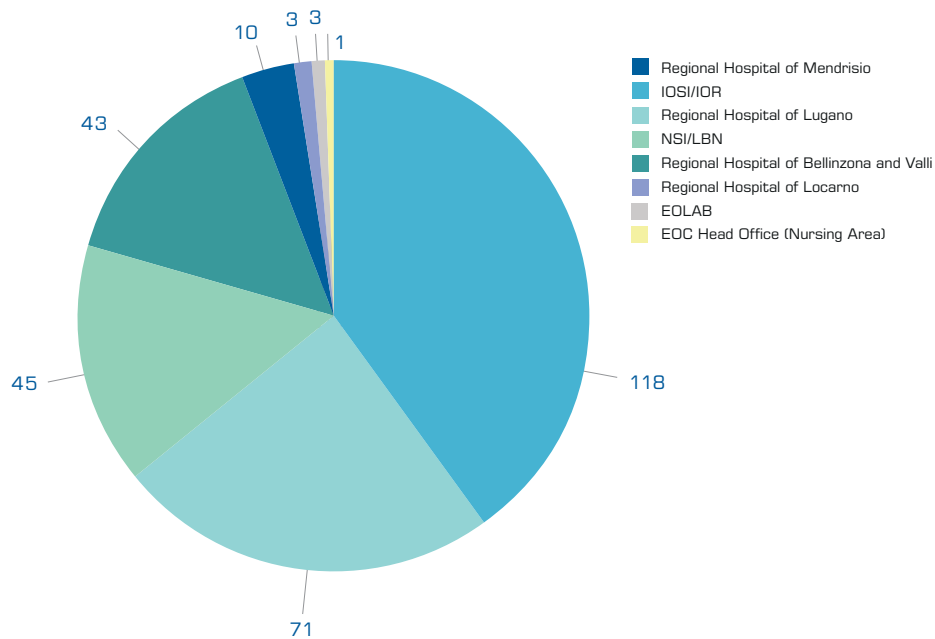


Publications

The scientific activity carried out by the EOC Services in 2016 resulted in 320 scientific publications.

- 294 original articles published in peer-reviewed journals
- 9 original articles published in non-peer-reviewed journals
- 17 books or chapters in books.

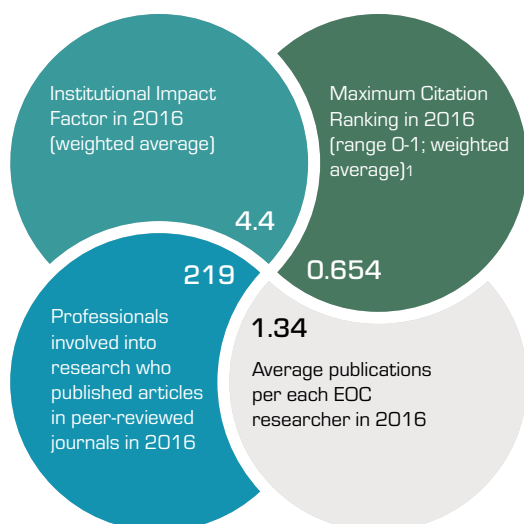
The pie chart below shows the number of peer-reviewed articles published in 2016 for each EOC institution:



The list of publications is available on the EOC website by accessing the link below:
www.eoc.ch/Area-Professionisti/Ricerca/Pubblicazioni-2016



At a glance:

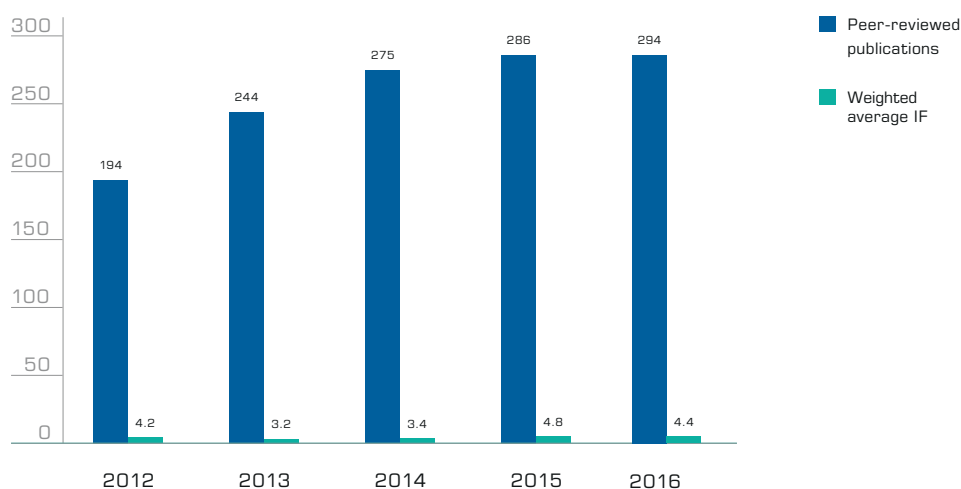


In detail:

In **2016**, the number of **peer-reviewed publications** continued to rise, compared to the data from the previous years (+52% compared to publications in 2012). The total impact factor (IF) (expressed as weighted average) was almost comparable to that of 2015 (Figure 1), in particular with regard to the publications in high and medium ranked scientific journals (Impact Factor $5 \leq IF < 10$ and over 10) in terms of absolute numerical values (Figure 2).

Furthermore, our peer-reviewed publications and the total impact factor are comparable with the publication data of St. Gallen Cantonal Hospital (KSSG) (data taken from Wissenschaftliche Publikationen KSSG 2015) (Figure 3).

Figure 1. Publications and Impact Factor (weighted average) of the EOC in the last 5 years



Note: the institutional affiliation excluded 28 of 286 publications in 2015 and 20 of 294 publications in 2016 from researchers not yet affiliated to the EOC when the articles were published.

1. Rezaei-Ghaleh N, Azizi F. The impact factor-based quality assessment of biomedical research institutes in Iran: effect of impact factor normalization by subject. Arch Iran Med. 2007;10(2):182-189.
Pudovkin AI, Garfield E. Rank-Normalized Impact Factor: a way to compare journal performance across subject categories. Proceedings of the 67th ASIS&T Annual Meeting. 2004; 41:507-515.

Figure 2. Absolute numerical values of the EOC publications sorted according to Impact Factor ranges

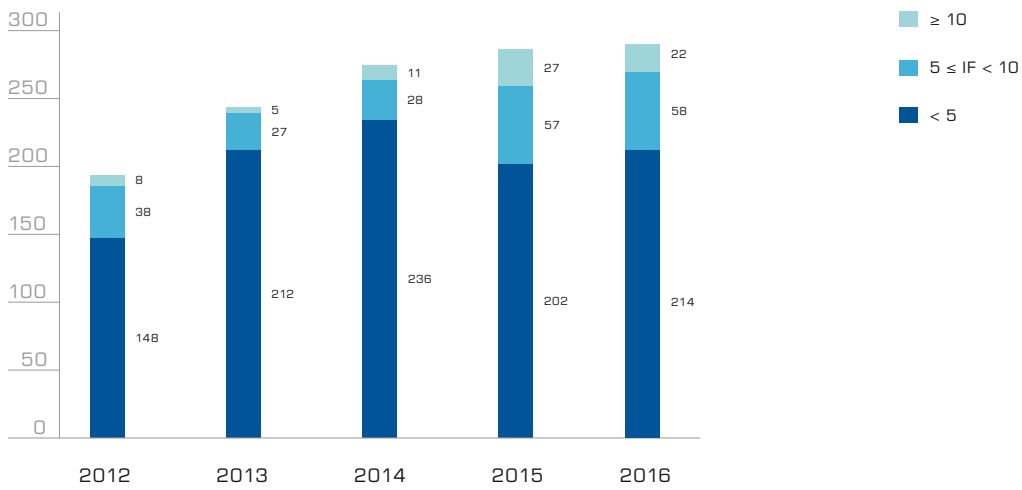
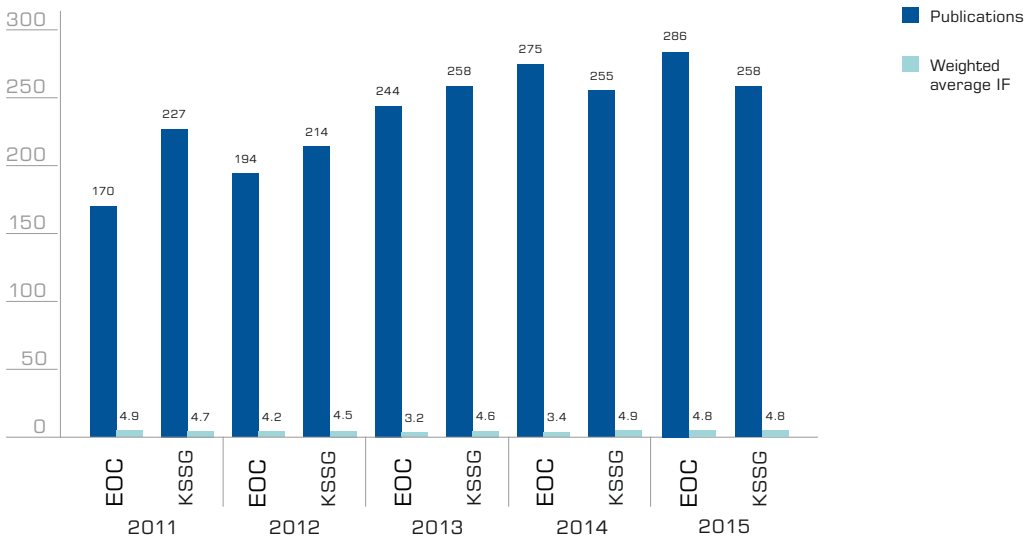


Figure 3. Comparison between the EOC and the KSSG peer-reviewed publications in the last 4 years (excluding 2016) with total Impact Factor



Impact of EOC research as a citation frequency measured by *h*-index

H-index is another popular citation index and was developed in 2005 by Hirsch to measure the academic impact of scientists. The application of this index has been extended to journals, countries, science funds and institutions². The *h*-index of a hospital focuses on high-impact research papers published by its doctors or researchers and provides an interesting evaluation perspective on the research impact of top hospitals. Although there are numerous multidisciplinary databases providing information on publications and citations for computing the *h*-index, the ones that are commonly used include: Web of Science, Essential Science Indicators (ESI), Scopus and Google Scholar.

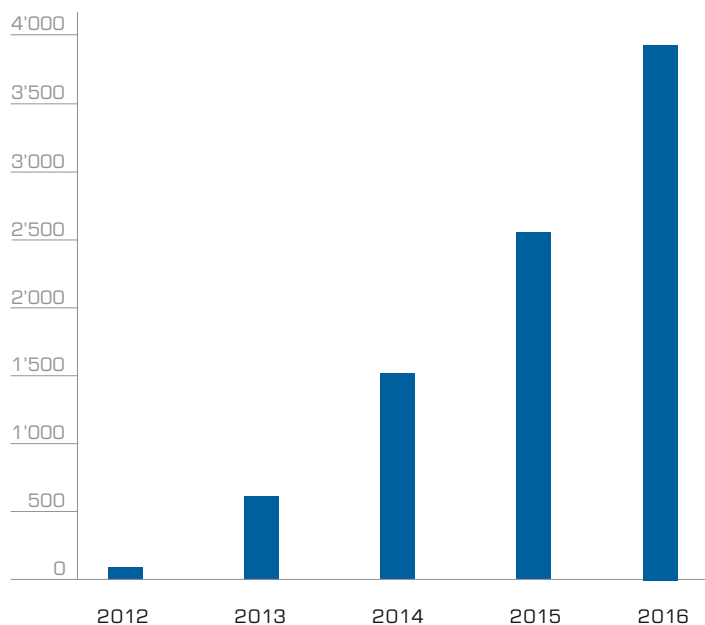
The citation frequency of the EOC publications was analysed by Thomson Reuters Web of Science platform on 29th May 2017. The indices used by the platform were: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI.

The citation frequency of our publications has constantly increased in the previous years (analysed timespan: 2012-2016 and 2006-2016), together with the total number of publications per year. The EOC *h*-index was 44 in 2012-2016 (Figure 4a) and 85 in 2006-2016 (Figure 4b) and these values indicate an achievement of a good institution as they measure the research impact and, therefore, the quality of services. A recent study based on ESI data collected from 1st January 2000 to 31st August 2010, highlighted that the top 50 high-impact hospitals in the world had a variable *h*-index ranging from 257 (Massachusetts Gen Hosp, the first one) to 21 (Taipei Vet Gen Hosp)³. In particular, two major hospitals, The Hospital for Sick Children (affiliated with the University of Toronto Faculty of Medicine, Canada) and Sahlgrenska University Hospital (a system of hospitals associated with the Sahlgrenska Academy at the University of Gothenburg, Sweden), had an *h*-index of 84 in the list mentioned above.

Figure 4. EOC Citations in Each Year

a. Timespan: 2012-2016

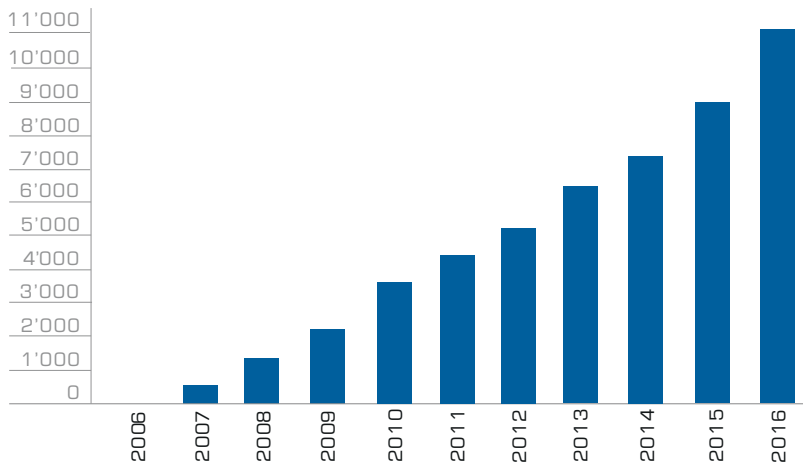
h-index: 44



2. Prathap G. Hirsch-type indices for ranking scientific research output of institutions. *Curr Sci.* 2006;91:1439.

3. Zhao SX, Ye FY. *h*-index of high-impact hospitals. *Curr Sci.* 2011;101(8).

b. Timespan: 2006-2016
***h*-index: 85**



The *h*-index of our Institution in the timespan 2012-2016 is higher than that of another major cantonal hospital, Kantonsspital Graubünden of Chur (Figure 5, analysis performed on 8th June 2017) and higher than half of the *h*-index of a renowned university hospital, such as CHUV of Lausanne (Figure 6, analysis performed on 8th June 2017).

Figure 5. Chur Cantonal Hospital Citations in Each Year

Timespan: 2012-2016
***h*-index: 27**

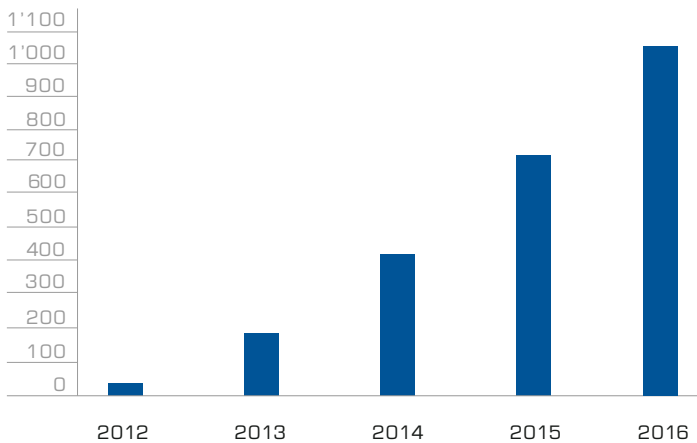
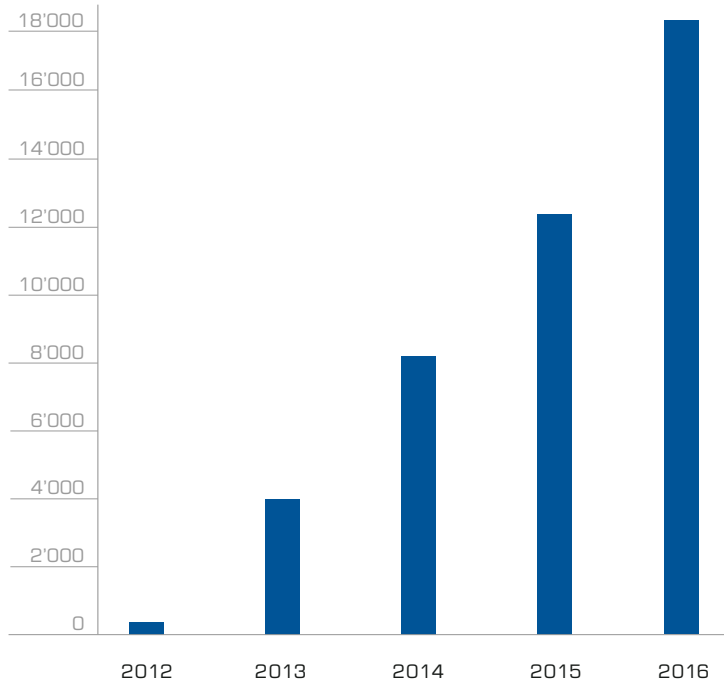


Figure 6. CHUV Citations in Each Year

Timespan: 2012-2016

h-index: 82



Although the *h*-index is only one measure and cannot cover all the achievements of a hospital or institution, it can provide a remarkable assessment of the research impact of a hospital or institution.

At the end of the day, all measurements of research quality should be taken with a grain of salt; it is certainly not possible to describe a scientist's contribution to a given research field using simple numerical values.

As Albert Einstein (1879–1955) famously observed: “not everything that counts is countable, and not everything that's countable counts”.

Corrigendum to

Table 1 and Figure 5 (the *h*-index of EOC researchers, timespan 2012-2015) of the EOC Scientific Report 2015:

Gaudio E. *h*-index: 9

Martinetti G. *h*-index: 4

Paone G. *h*-index: 3

(analysis performed on 29th May 2017)