Open Medical Education

Azad Mashari (azad.mashari@utoronto.ca) & Warren Luksun, Department of Anesthesia, University of Toronto

web 2.0...

the powerful idea:

user-**g**enerated **C**ontent

allows users to be more than passive consumers of information.

Read Only —ugc→ **Read/Write**

Image: Stewart Butterfield, flickr.com

users ≠ creators

"creativity is consumed
but the consumer
is not a creator"
(Lessig, ted.com)

users = creators

Highly collaborative

Allows users to create, remix, customize and build on the works they use.

Incremental contributions from vast numbers of users conglomerate into something far more substantial than what any formal group of users could assemble.

Inherently peer reviewed

OPEN ACCESS

For a work to be open access, the copyright holder must consent in advance to let users "copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, **subject to proper attribution of authorship**."
(Bethesda Statement on Open Access Publishing, 2003)

Can **ugc** and **open access** do for medical knowledge what Wikipedia has done for general information?

The ability to access, study, and build upon previous work is at the core of innovation. We stand on the shoulders of giants. Medical research and education are no exception.

Currently, most refined medical knowledge is available with read-only access via pay-for-access journals and collections. These limitations impair collaboration, new research enterprise, and knowledge dissemination; ultimately, knowledge translation fails to deliver maximal benefit to patients.

Inspired by public knowledge projects such as Wikipedia researchers and educators are increasingly releasing their work under open access licenses. This paradigm can unleash a vast source of untapped creativity and knowledge to improve knowledge translation, medical innovation, education and care on a global scale.

Image: mushon cc-by-nc

Open Medicine: The Present

Research

There are currently over 400 open access medical journals, including **Open Medicine** and PLoS journals. OA journals in anesthesiology and related specialties include: **BMC Anesthesiology**, **Critical Care**, **Open Anesthesiology Journal**, **Patient Safety in Surgery**, **Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine**, **Anesthesiology Research and Practice** and **Applied Cardiopulmonary Pathophysiology**.

Reviews to date suggest that **articles in OA journals are cited more quickly and more frequently than those published in non-OA journals.** (Eysenbach G. PLoS Biol 2006 May;4(5):e157)

Reference

Various medical reference projects are underway including the **Wikipedia Medicine Portal**, **Medpedia**.com, **Radiopedia**.org, and **GANFYD**.org. Cardionetworks (Holland) hosts several growing sites including **ECGPedia**.org, **PCIPedia**.org and **EchoPedia**.org.
Pubmed Health, a project of the National Library of Medicine, provides open access reviews for health care professionals. The reviews include summaries for the general public.

Education

Currently there are few completely OA educational resources such as International Anesthesia Society's **OpenAnesthesia**.org or **e-meducation**.org. Most other resources allow no-fee access but restrict reuse and modification of works to various extents. Examples include **ClinicalCases**.org, a rich collection of case discussions, medical news and images; **ECGlibrary**.com and **EMedu**.org's ECG interpretation tutorials, and University Health Network's **Perioperative Interactive Education** a growing collection of sophisticated teaching simulations.

OpenAnesthesia.org · PIE · NATIONAL LIBRARY OF MEDICINE · PubMed Health · ECGPEDIA.ORG

Open Medicine: Frontiers

Research

Open Data: tools for increasing access to raw and unpublished scientific data.

Publishing: Journals such as Open Medicine are continuously experimenting with methods to incorporate user-generated content such as **open peer-review** and **wiki-based meta-analyses and systematic reviews** that are continuously updated by users with the original authors acting as editors.

Policy & Funding: **CIHR** (Canada), the **NIH** (US) and the **WellcomeTrust** (UK) now require grant recipients to make their work open access. A growing number of universities such as **Harvard**, **MIT** and **Stanford** also require that all research be released under OA.

Open Hardware Repository (OHWR.org): Funded by the European Organization for Nuclear Research (CERN). The project is collecting and developing open access hardware, including medical devices.

Education

Open Courseware Consortium: a widely adopted system with great unrealized potential for medical education. MIT is gradually making all course materials, including video lectures, available to the public.

Wikiversity: a project of the Wikimedia Foundation, collects open access educational resources.

Wiki-based **live medical textbooks:** a small core of editors organize contributions from a wide user-base. Examples include a textbook of anesthesia (OpenAnesthesia.org) and a textbook of echocardiography (ECHOpedia.org).

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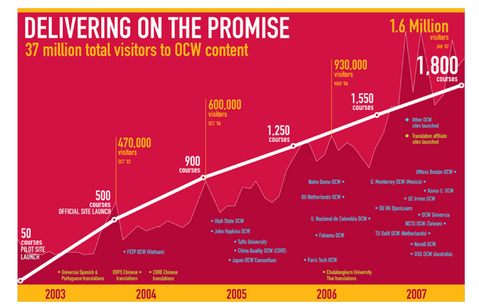

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