

Significance, limitations and methods of internet research in the field of drugs and addiction

Thomas Rouault (Director Toxibase), Élisabeth Fellingner (CIRDD-Toxibase/ALT)

In around ten years, the internet has totally transformed the access to and relationship with information on a global scale. Today, everyone acknowledges that this technological revolution has had a considerable impact on daily life, how we work, freedom and the control of information, the economy and business.

In the field of drugs, it has also turned upside down not only the traditional relationship with scientific and professional information but also the management of preventive actions, the expression of opinions in such a hotly debated field, and access to knowledge and clinical data, among other things.

This trend can be illustrated with a few examples.

A recent search on the subject of GHB, carried out within the context of the European Elisad gateway project, identified 27 400 hits with Google and 24 914 with Northern Light on a supposedly specialised subject! Concerning ecstasy, Google gave access to 13 800 pages, Yahoo to 10 100 and Altavista to 6 498.

The internet is radically changing the scientific publishing environment (4,11,13): today there are more than 65 scientific reviews and around fifty publishers specialising in the drugs field accessible on the net with a combination of access methods, some for a fee, some free of charge. Many reviews, often old ones, are now considering solely electronic publication. This process, which affects many fields other than drugs, now seems irreversible, to such an extent that it has encouraged the publishers, who are concerned about profitability and the scientific quality of the publications, to form an international association¹ created following the consensus declaration adopted at the Farmington conference in 1997.

Many institutions, research centres and public sector bodies now prefer internet publication to paper publication. This trend is particularly developed for the North American sites which incorporate electronic publication within a global information and communication strategy, including under the same title databases, services for the general public, epidemiological and statistical data, address lists, news, etc.

Bogenschutz (1) assesses the impact of the internet in terms of information on the major psychoactive substances based on the three leading sites² that lobby in favour of unrestricted private use but which are also aimed at risk reduction. They all offer a considerable volume of information: several thousand freely accessible html pages and files, of clearly variable quality, for several hundred thousand regular visitors. He does not, however, conclude that the internet has a direct influence on the level and trends in the use of psychoactive substances. This question has become a subject of heated debate, particularly concerning the impact of the internet among adolescents³. On the one hand the advocates of the lobbying sites consider that their information alone is effective and that any site identified as a

¹ ISAJE. International Society of Addiction Journal and Editors. *Alcoologie et Addictologie* [Alcoholology and addictology], 2001, 23(3), p.391-392.

² www.lycaem.org, www.hyperreal.com, www.erowid.org

³ "Correspondence" section of the *New England Journal of Medicine*, Vol.345, 6, 9 August 2001, p. 469-471.

“.gouv” (government) site is not credible in the eyes of this population; on the other, the defenders of the “official” sites consider that the lobbying sites promote proselytism and the development of at-risk usage behaviours. This question had also been tackled within the context of a follow-up to the first TREND report, carried out by A. Fontaine for the OFDT in 2000 (9), on new trends in drug use and representations based on monitoring certain internet sites. That just shows how free of all legal, scientific or personal constraints the information on drugs is on the internet.

Categories and characteristics of the sites

It is, of course, totally impossible to evaluate precisely the number of sites that deal with addictions. If one limits oneself to the institutional sites, without including the promotional and commercial sites, the Elisad gateway project (cf. box) has more than a thousand just for the countries of the European Union. For North America, the figure is much higher; it is very significant for other regions and countries. All the subjects relating to addictions are present on the internet: illicit drugs, tobacco, alcohol, doping, pathological gambling, at-risk behaviours, etc. On a subject as specific as Foetal Alcohol Syndrome (FAS) there are dozens of sites in North America alone.

The sites on addictions are divided primarily into the following categories:

- *The institutional sites* are developed by the organisations that already produce information outside the internet (research centres, documentation centres and libraries, prevention centres, care centres or networks);
- *The public sites* are developed by governments or the public sector;
- *The sites of the international organisations:* UN, UNDCP, INCB, WHO, Unesco, EMCDDA, European Commission, Council of Europe/Pompidou Group. These sites sometimes have a sprawling structure in which it can be hard to get one’s bearings.
- *The sites of the publishers and scientific reviews:* genuine global monitoring portals now allow a subscription and on-line monitoring of publications⁴ (cf. 4,11,13);
- *The generalist sites:* many public health sites include information on addictions;
- *The lobbying and user sites:* produced by often important NGOs, these sites aim to promote their political objectives and communicate with their supporters, and also to provide evidence of and give advice on the use of substances;
- *The individual sites:* this is where the richness and freedom of the internet is found. On certain subjects, these sites are sometimes more interesting than the institutional sites if they mention their sources properly!
- *The commercial sites:* these cover the pharmaceutical laboratories, the drinks manufacturers, the tobacco industry. Sites that are technically very impressive, with a presentation which, cleverly, often leaves their subjective nature rather vague.

In the field of addictions, therefore, the internet is an ambivalent tool. It is both a “real treasure and a sea of confusion” in the words of Monahan and Colthurst (8).

Certain general characteristics of the internet must be reiterated in order to understand its current limitations:

- Only 40% of the 80 million internet sites that exist are accessible by using all the generalist search engines (of the Yahoo, Google, Altavista type)⁵. Search results sometimes vary spectacularly from one search engine to another, all the more so since the trend is for listings for which a fee is payable which introduces an additional bias.

⁴ www.swets.nl, www.ebsco.com, www.tdnet.com, article@inist which is the leading French provider of scientific articles.

⁵ Lawrence S., Gilles C.E. *Accessibility of information on the web*, Nature, 1998, 400 (6740), p.107-110.

- The overwhelming predominance of English imposes itself as a standard for scientific publication on the internet (less than 2% of the global information offering on the internet is in French). In the field of addictions, there are more sites in French for Canada and Switzerland than for France.
- Access to the internet, although increasingly widespread, remains uneven.
- The internet offers few guarantees of information quality and even fewer of standardised data from one site to another. It is in essence information which is changeable and non-permanent.
- There are many conflicts of interest: the objectivity criteria, commercial, ideological and scientific, can only rarely be directly perceived by the internet user but often result in truncated or biased information, with no explicit ethical reference.
- The validation of the information is uncertain: the procedures for scientific validation, updating and representativeness of information are seldom found.
- The technical quality of the sites is very variable.

It is not a question of making a value judgement on the internet that is negative overall but of being aware that using it should lead any internet user to question the limitations of this tool in order to supplement his own research activity, if need be, with other more traditional sources.

In parallel with these criticisms, it is quite clear that the internet constitutes an exception tool for acquiring knowledge, for training and for prevention.

Which search methods on the internet?

A regular internet user, in the field of addictions, will today notice the profusion and abundance of the information offering and at the same time the vast complexity, indeed the impossibility, of carrying out a single search on a specific subject using several sites simultaneously (10).

The internet offers multiple search techniques and tools which will be presented in brief after a few basic words of advice on searches.

- Some words of advice:
 1. *Identity your problem precisely*: the more specific the subject, the easier the search will be (e.g.: address, name of a substance, an author). Pay great attention to the choice of key words: check whether dictionaries, subject tree structures or thesauruses are available for the search; read and use the technical help of the engines and the sites.
 2. *Use as a priority the portals and sites that specialise* in addictions rather than search engines such as Yahoo, Google, Voilà, etc. (cf. box on the main portals). Always use several engines for a search.
 3. *Specify each search criterion*: language, date, type of information (statistical, address, bibliographical) before accessing the internet.
 4. *Use the “advanced” search options* rather than a simple text search with a single word.
 5. *Question the search results* before exploiting them: are there options to make them more specific? (language, detailed or limited display, links, score, etc.).
 6. *Check whether the search can be supplemented* by a source other than the internet, for example a database, list, directory, person or resource centre.
- Search methods and tools:
 1. *Search engines*: these remain the principal way in to the internet and give access to information that could not have been found elsewhere. Their limitations are well-known: variable and uncertain results (scoring), listing which does not guarantee any quality in terms of the information content of the sites, irregular updates, numerous “broken” links, lack of precision on specialised subjects.

2. *Intelligent agents (6)* are software packages that are usually downloadable from the net (and cheap). They offer the following functions: combined searches across all the leading engines; indexation and summaries of html pages; search summaries; management of repetitions; presentation of results; site capture which then allows you to work offline; monitoring and automatic updating of the search.⁶
3. *Browsing* consists of searching using a thematic tree structure developed to varying degrees which classifies the results by subject.
4. *Interactivity*: news and mailing lists are tools that are more useful for monitoring and updates but they are a means of quickly finding a piece of information thanks to other internet users.
5. *Specific search software*: for example, the software package End-note⁷ allows a simultaneous search across bibliographical databases, and it classifies, normalises and updates the results.
6. *Subject indexes and portals (7)* (cf. box) are certainly the most beneficial technique for finding a specialised piece of information on the subject of addictions.

How to evaluate the sites and the search results?

There is a considerable mass of information accessible on the internet. In 2000, it was estimated that there were tens of thousands of sites in the field of health including more than 8 000 in France. The evaluation practices are now expanding fast. For the “average” surfer it is essential to be familiar with these in order to refine one’s critical sense, browse in a disciplined manner and avoid wasting a considerable amount of time checking all the information.

Some of the quality criteria are undeniable (14).

First and foremost *the credibility and affiliation* of the author or the site producer: it is essential to identify clearly who has produced the information. We still see too many sites which do not mention their sources or their experience. This casts discredit on their content from the outset.

The validity of the information is the second important criterion: is the information dated? Is there an editorial or scientific committee? Is the data complete or partial? Is it standardised in certain instances (databases, statistics, addresses)? Is the information independent of any commercial or individual interest?

Relevance is another difficult but essential evaluation criterion: is the type of information offered suitable for the target audience? Are the objectives of the producer clearly explained or purely promotional? Is the user directed to watered down content, browsing from one site to another and gleaning only rumour or silence? Is the information comprehensible? Are the html links appropriate, sufficient or insufficient?

Originality: is the information primary or is it drawn from another source? Does it meet the stated objectives concerning the scope of the subjects dealt with and their accuracy?

Are the data accessibility and the site maintenance up to the task? Quite often some sites are very unstable, their technical performance uncertain, their recommendations for technical access inappropriate or obsolete, the link to the webmaster is nonexistent or does not work, there is no FAQ or on-line help, or the design and logical organisation are too complicated.

In short, everything that is easy to check in a journal or professional publication is not necessarily so on the internet. In a review, a journalist or author signs his article and is responsible for his sources, the editorial committee is the guarantor of the standard of the whole publication, and of the selection and the originality of the articles, the page layout guarantees a certain degree of standardisation and a homogeneous standard of reading. In reality, even if a “net etiquette” does officially exist, it is still virtual as far as the content and quality of the sites is concerned.

⁶ Some intelligent agents: www.copernic.com/fr, www.lexibot.com, www.trivium.fr (for umap), www.agentland.fr (for searchpad).

⁷ www.ritime.com

There are many initiatives regarding site evaluation, the most important of which is undoubtedly the DESIRE project (2), financed by the European Union, which has resulted in an evaluation manual and a software package for searching sites. Many health networks or libraries have defined their own methodology as that of “net scoring”, applied in France by a group of professionals⁸ called Centrale Santé, which consists of grading the sites according to specific criteria and giving them a final comparative mark. More than 3 000 sites now adhere to the HON (‘Health On the Net’⁹) conduct code which aims to introduce better ethics into the dissemination of medical data on the internet, for the health professionals and the users of treatments alike. The other important initiatives are the RENARDUS¹⁰ site, another project financed by the EU and based on the DESIRE methodology, which identifies the portals for several social science disciplines; the British network OMNI¹¹ or its health sector equivalent in the United States, HITI¹².

In the field of addictions, as for health (3,5), it is now possible to use truly qualitative portals on drugs and addictions of which the ELISAD association gateway represents the most important project in Europe (12). The box below presents in brief the most interesting portals, or “gateways”, in this field.

In fact the “portal” sites, in their concern for qualitative evaluation and analysis of internet sites, appear fairly similar to the collective expertise approaches. We would reiterate that four expert research evaluations were recently carried out in France on drugs¹³, not forgetting the studies published within the context of the OFDT work programme. Henceforth, the ‘Evidence Based Medicine’ (EBM) approach will no longer be able to disregard internet information sources on account of the significant trends in scientific publication and the development of warning systems on this medium. It is also interesting to note that since 1997 a group called the Cochrane group has existed, which specialises in drugs and addictions and which has already carried out reviews of the literature on numerous subjects¹⁴, and which organises its own coordination by experts and the publication of its results primarily over the internet.

In response to the customary acknowledgement, “you can always find everything on the internet”, every internet user, in the field of drugs and addictions and in other fields alike, must be aware that searching and browsing, even if they are always more complex due to the continuous increase in the volume of accessible sites and content, are also accompanied by new tools and methods which they simply have to master in order to retain their autonomy, save themselves time and find “the right information”.

⁸ www.chu-rouen.fr/netscoring and www.chu-rouen.fr/cismef

⁹ www.hon.ch

¹⁰ www.renardus.org

¹¹ Organising Medical Networked Information: www.omni.ac.uk

¹² Health Information Technology Institute: www.hitiweb.mitretex

¹³ Roques (B.). *La dangerosité des drogues : rapport au secrétariat d'Etat à la Santé* [The dangerousness of drugs: report to the State secretariat for Health], Paris, O.Jacob/Documentation française [French documentation], 1999, 318 p. and for l'INSERM, *Expertise collective cannabis : quels effets sur le comportement et la santé* [Collective cannabis expertise: what effects on behaviour and health]? Paris, Les éditions Inserm, 2001, 429 p. ; *Expertise collective alcool: effets sur la santé* [Collective alcohol expertise: effects on health], Paris, Les éditions de l'Inserm, 2001, 358 p. ; *Ecstasy: des données biologiques et cliniques aux contextes d'usage* [Ecstasy: biological and clinical data in contexts of use], Paris, Les éditions de l'Inserm, 1998, 345 p.

¹⁴ www.cochrane.org then select cochrane groups>collaborative review groups

The work of TOXIBASE on internet sources

Since 1997, the TOXIBASE network has been carrying out internet monitoring in the field of drugs using a detailed description and a qualitative analysis of sites similar to that carried out within the context of the Internet Gateway project of the European association ELISAD. This work can be accessed through the following Toxibase services:

- *A selection of essential sites* at www.drogues.gouv.fr (heading "useful web sites")
- *A database of sites*, accessible through the centres of the Toxibase network, covering around 150 primarily French-speaking sites which are updated regularly.
- *A column in the Toxibase review entitled "www"*, which presents a very detailed analysis each quarter of sites that exist on a given subject, detailing the services accessible for the internet user: databases, generalist portals, prevention and information for the general public, pharmacological data, scientific research, epidemiological data and warning systems, etc. *Subjects dealt with since 2001: medicines (review no. 1/2001), trafficking by road and at-risk behaviours (no. 2/2001), doping (no. 3/2001), new drugs and new uses (no. 4/2001), tobacco (no. 5/2002), addictions without drugs (no. 6/2002), trafficking and international geopolitics (no. 7/2002).*

For further information: TOXIBASE. 76 rue Pierre Delore 69008 Lyon. toxibase@toxibase.org

Soon an internet portal for information about European sites: the Internet Gateway project of the European association ELISAD

ELISAD (*Association européenne des bibliothèques et centres d'information sur l'alcool et les autres drogues* [European association of libraries and centres of information on alcohol and other drugs]) has been in existence since 1988 and brings together around 50 centres from various countries in the field of drugs. It is an independent association which is one of the oldest and most stable networks in this field. Its objectives consist of developing specialist tools and information resources in Europe through the organisation of an annual conference, an internet site, a newsletter and an internet distribution list for its members.

The ELISAD Gateway project was created in 1999 and draws its inspiration from comparable initiatives such as the <http://sosig.ac.uk> gateway in the field of social sciences in the United Kingdom or, in France, the public health gateway of the University of Rouen www.chu-rouen/cismef.fr.

The ELISAD Gateway project in the field of drugs will give access to a database comprising a selection of nearly **1 000 European internet sites**, with an analysis of each one by means of an

extremely detailed questionnaire. Particular attention is paid to the quality of the sites which are selected using the following criteria: scientific and professional references of the authors and the site producers, ethics and clarity of the objectives, relevance of the content, updating and validity of the information, technical quality and navigation.

Eight countries are participating in the project* which is financed by the European Commission (SANCO/Community health directorate) within the framework of the European programme for drug prevention and drug addiction. The German centre ARCHIDO is the coordinator and the EMCDDA is involved in the methodological monitoring and in extending the project for experts from Eastern European countries, within the context of its own activities (particularly for the REITOX network).

The ELISAD gateway will cover the following subjects: psychoactive substances; behaviours, effects and consequences of uses; addictions without substances; any information relating to prevention, policies, research, treatments, economy and trafficking. Excluded are sites which give details of how to obtain substances, sites that are exclusively promotional or commercial, as well as personal sites which do have no added value in terms of scientific or professional information.

*Germany (Archido), Spain (PNSD), France (Toxibase), Italy (Gruppo Abele), Netherlands (Trimbos), Czech Republic and Eastern European countries (SZU), United Kingdom (Drugscope), Sweden (CAN).

For further information: www.elisad.org

The principal international portals for searching for internet sites on addictions

www.atod.org *The Virtual Clearing House for Alcohol, Tobacco and Other Drugs (VCATOD)*

This portal is coordinated by the CCLAT-CCSA (*Centre canadien de lutte contre l'alcoolisme et les toxicomanies* [Canadian centre for alcoholism and drug addiction]) and offers access to an exceptional volume of on-line documents by means of selecting around forty partner organisations in a vast number of countries, although the principal orientation tends to be North American. With a trilingual English-French-Spanish version, the VCATOD is in fact a hybrid site, somewhere between the function of a virtual library, pointing to numerous documents, and that of a genuine portal leading to internet sites. Searching is done by browsing through the principal subjects or using a free search engine.

www.adin.com.au *Australian Drug Information Network*

Developed by the Australian Drug Foundation, ADIN offers access to more than 600 international sites, primarily Anglo-Saxon and Australian, in the field of drugs. One interface is available for professionals and another for the general public.

www.addictionsearch.com

Addiction Search has been under development since 2001 by the psychologist Emil Chiauuzi with priority given to the research sector. 200 to 300 sites are accessible with access by subject.

Many other international sites, although not offering the functionality of true research portals as the previous sites do, offer well organised links to numerous reliable sources including the following:

www.health.org

The site of the NCADI (National Clearinghouse for Alcohol and Drug Abuse) is an essential source for the United States: access to the Prevlene service and the NIDA publications.

www.admin.ch/bag/

The site of the OFSP (*Office fédérale de la santé publique* [Federal public health office], Switzerland) is a model for all government health sites. The abundance of links and accessible texts make it an indispensable source.

www.emcdda.org

The links heading of the EMCDDA gives access to the most important European sites and those of the leading international organisations.

www.jointogether.org

Developed by the Addiction Research Foundation Library in Boston, this site offers a high-quality architecture and gives access to over 600 international sites by means of a database.

www.salis.org

SALIS is the equivalent of ELISAD for North America. Its site offers a column of links to scientific publishers and reviews and an index of international databases.

In addition, a selection of sites:

In France:

www.drogues.gouv.fr: official site, developed by MILDT [*Mission interministérielle de lutte contre la drogue et la toxicomanie* – Interministerial Mission on Drugs and Drug Addiction] in partnership with DATIS, collaboration with [?¹⁵], a genuine knowledge base for professionals and the general public.

www.sante.gouv.fr: provides further information on the general health policy of the State.

www.alcoveb.com and www.anpa.asso.fr: these sites specialise in problems in the prevention and treatment of alcohol addiction.

www.tabac-info.net: for updating one's knowledge on tobacco addiction and finding numerous links to other sites.

www.dopage.com (doping portal) and www.cpld.fr (*Conseil de prévention et de lutte contre le dopage* [Committee for the prevention and control of doping]): for disseminating precise information and official documents directly to all audiences.

www.anit.asso.fr, (*Association nationale des intervenants en toxicomanie* [National association for organisations involved in drug addiction]), www.ampt.org, (*Association méditerranéenne de prévention et de traitement des addictions* [Mediterranean association for the prevention and treatment of addictions]), www.cdripd.cg59.fr.

Translator's note:

¹⁵ Word missing in original?

(developed by the *Conseil général du Nord* [General council of the North]): these three associative, user-friendly sites, aimed at players on the ground, give a large amount of high-quality, up-to-date information.

www.cesames.org: site for the *Centre de recherche psychotropes, santé mentale, société* [Research centre for psychotropic drugs, mental health and society] of the CNRS is aimed more at researchers.

Foreign sites:

www.nattc.org: is a remarkable on-line training site, produced in the United States by a national network created by the SAMHSA and the CSAT

www.drugpolicy.org: is the site of the Drug Policy Alliance, an NGO resulting from the merger of the Lindesmith Centre and the Drug Policy Foundation.

www.drugscope.org.uk: proves to be the most comprehensive site in the United Kingdom.

www.drugs.indiana.edu: this exemplary information site has been created at the initiative of the Indiana Prevention Resource Centre

www.globalink.org: represents the most extensive portal in the world on all tobacco control problems, with direct access and access reserved for members of the network.

www.prevnet.net: this European network on prevention through the internet is being developed with the support of the European Union .

www.prevention.ch: is an excellent Swiss portal on the subject of preventing dependences.

www.sfa-isp.ch: is the internet “shop window” of the *Institut suisse de prévention de l'alcoolisme* [Swiss institute for preventing alcoholism].

Sites of international organisations:

www.unesco.org: despite the density of the information it conveys, the good structuring of this site means one can quickly find the UNESCO educational programmes on drugs and AIDS and the MOST programme which concerns the social sciences.

www.coe.int: the portal of the Council of Europe currently accommodates the works and publications of the Pompidou Group, a group of experts on trafficking and narcotics abuse.

www.incb.org: *Organe international de contrôle des stupéfiants* (OICS = INCB [International Narcotics Control Board])

www.who.int: the site of the World Health Organisation (WHO) has a wealth of information and is indispensable.

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