



General review

The impact of the web and social networks on vaccination. New challenges and opportunities offered to fight against vaccine hesitancy

Impact d'Internet et des réseaux sociaux sur la vaccination. Nouveaux défis et nouvelles opportunités de lutte contre l'hésitation vaccinale

J.-P. Stahl^{a,*}, R. Cohen^b, F. Denis^c, J. Gaudelus^{d,e}, A. Martinot^f, T. Lery^g, H. Lepetit^h

^a Infectious Diseases Department, University of Grenoble, CHU de Grenoble, Grenoble, France

^b CHU de Créteil, 40, avenue de Verdun, 94010 Créteil cedex, France

^c CHU Dupuytren, 2, avenue Martin-Luther-King, 87042 Limoges cedex, France

^d Hôpital Jean-Verdier, hôpitaux universitaires Paris-Deine-Saint-Denis, 93140 Bondy, France

^e Université Paris-XIII, AP-HP, Paris, France

^f University of Lille, CHU de Lille, EA 2694, 2, avenue Oscar-Lambret, 59037 Lille cedex, France

^g GSK vaccines, 100, route de Versailles, 78163 Marly-le-Roi cedex, France

^h Institut des Mamans, 2, rue Balny-d'Avricourt, 75017 Paris, France

Received 4 February 2016; accepted 11 February 2016

Available online 14 March 2016

Abstract

Objective. – Vaccine hesitancy is a growing and threatening trend, increasing the risk of disease outbreaks and potentially defeating health authorities' strategies. We aimed to describe the significant role of social networks and the Internet on vaccine hesitancy, and more generally on vaccine attitudes and behaviors.

Methods. – Presentation and discussion of lessons learnt from: (i) the monitoring and analysis of web and social network contents on vaccination; (ii) the tracking of Google search terms used by web users; (iii) the analysis of Google search suggestions related to vaccination; (iv) results from the Vaccinoscopie[®] study, online annual surveys of representative samples of 6500 to 10,000 French mothers, monitoring vaccine behaviors and attitude of French parents as well as vaccination coverage of their children, since 2008; and (v) various studies published in the scientific literature.

Results. – Social networks and the web play a major role in disseminating information about vaccination. They have modified the vaccination decision-making process and, more generally, the doctor/patient relationship. The Internet may fuel controversial issues related to vaccination and durably impact public opinion, but it may also provide new tools to fight against vaccine hesitancy.

Conclusion. – Vaccine hesitancy should be fought on the Internet battlefield, and for this purpose, communication strategies should take into account new threats and opportunities offered by the web and social networks.

© 2016 Elsevier Masson SAS. All rights reserved.

Keywords: Vaccine hesitancy; Social network; Google; Internet; Web

Résumé

Objectif. – L'hésitation vaccinale constitue une menace grandissante, à même d'augmenter le risque d'épidémies et de faire échouer les stratégies des autorités sanitaires. L'objectif de cette étude était de décrire le rôle conséquent des réseaux sociaux et d'Internet en matière d'hésitation vaccinale et l'influence qu'ils exercent sur les attitudes et comportements relatifs à la vaccination.

Méthodes. – Présentation et description des leçons tirées : (i) d'une analyse du contenu publié sur Internet et sur les réseaux sociaux concernant la vaccination ; (ii) d'une analyse des recherches effectuées par les internautes sur Google ; (iii) d'une analyse des suggestions proposées par Google en matière de vaccination ; (iv) des résultats de l'étude Vaccinoscopie[®] menée chaque année, depuis 2008, auprès d'échantillons représentatifs

* Corresponding author.

E-mail address: JPStahl@chu-grenoble.fr (J.-P. Stahl).

de mères françaises (de 6500 à 10 000) dont l'objectif est de suivre les attitudes et comportements des parents français en matière de vaccination et d'évaluer les couvertures vaccinales des enfants ; et (v) de différentes études publiées sur le sujet. **Résultats**

Les réseaux sociaux et Internet jouent un rôle conséquent en matière de diffusion de l'information vaccinale et modifient le processus décisionnel relatif à la vaccination et, de manière plus générale, la relation médecin/patient. Internet peut parfois alimenter certaines polémiques vaccinales, influençant ainsi l'opinion publique. Cependant, Internet offre également de nouveaux outils de lutte contre l'hésitation vaccinale.

Conclusion. – La lutte contre l'hésitation vaccinale doit se jouer sur Internet. Les stratégies de communication en la matière doivent donc tenir compte des nouvelles menaces et opportunités offertes par Internet et par les réseaux sociaux.

© 2016 Elsevier Masson SAS. Tous droits réservés.

Mots clés : Hésitation vaccinale ; Réseaux sociaux ; Google ; Internet ; Web

1. Introduction

Parents are increasingly skeptical about vaccine safety. Vaccine hesitancy has now become a threat to public health. First of all, vaccine hesitancy leads to disease outbreaks, [1] such as poliomyelitis [2], whooping cough [3], and measles as recently observed in the United States [4] with the so-called “Disneyland measles outbreak” or with the 2011 large-scale measles epidemic (also affecting adults) in France [5]. Secondly, vaccine hesitancy is a major obstacle to vaccination policies. In June 2013 for example, the Japanese Ministry of Health, Labor, and Welfare suspended its recommendation for human papillomavirus (HPV) vaccination after a series of highly publicized alleged adverse events following immunization stoked public doubt about the vaccine's safety [6].

Vaccine hesitancy can be observed in many countries [7]. Data obtained by the media surveillance system shows that in France the proportion of negative messages about vaccines is particularly high: 154 times among 4900 negative messages worldwide versus 45 times among 9157 neutral or positive messages worldwide [7]. Consequently, France is particularly affected with an insufficient vaccination coverage for meningococcal and HPV infections. [8,9]

We will:

- describe and illustrate the impact of the Internet on vaccination information, decision process, attitude and behaviors;

- examine how the Internet may favor vaccine hesitancy but also provide valuable resources to tackle vaccine skepticism.

2. Impact of the web and social networks on vaccination

2.1.1. The Internet plays a major role in producing and disseminating information about vaccination

On average, the web and social networks (hereafter “the Internet”) produce more than 48,000 contents related to vaccination every month (Fig. 1). However, this estimation based on the monitoring of French main sources of digital contents is below reality, as it does not take into account private contents or discussions and searches related to specific vaccinations.

As a result, information related to vaccination has changed in many respects:

- origin: with social networks, any web user may produce or relay vaccine-related information to a large number of individuals;
- nature: as the issuance of information on vaccination is no longer a matter of experts, and because parenting forums and social networks offer premises for parents to gather and discuss their parenting issues, the Internet produces more subjective and emotional contents related to vaccination;
- speed: the Internet has accelerated the speed of information and broken down barriers (Fig. 2). By providing tools, such

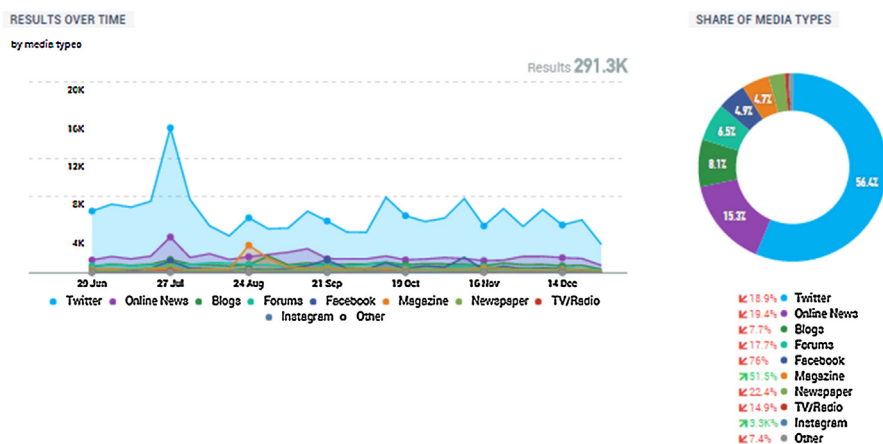


Fig. 1. Number of content related to vaccination from July 1st to December 31st, 2015 and share of media types.
Nombre de contenus publiés sur la vaccination du 1^{er} juillet au 31 décembre 2015 et répartition en fonction des types de médias.

Download English Version:

<https://daneshyari.com/en/article/3412256>

Download Persian Version:

<https://daneshyari.com/article/3412256>

[Daneshyari.com](https://daneshyari.com)