Challenges in Government Inter-Organizational Information Integration in the Context of Measles Rubella Vaccination in India

Jayan V., Centre for Development of Advanced Computing, India

Sreejith Alathur, National Institute of Technology, Karnataka, India

iD https://orcid.org/0000-0002-7970-5147

ABSTRACT

Most of the countries are heading to Government 3.0 with the advent of information communication technology (ICT). Information integration has to be done with the support of different stakeholders for an effective e-governance ecosystem. The use of artificial intelligence (AI) and high-end processors solved the issues to some extent. But the socio-political intervention is making the government inter-organizational information integration (GIII) difficult when information turns into misinformation. Misinformation in social network sites (SNS) is increasing alarmingly and is also affecting the healthcare sector. The study is focused on the trends in decreasing vaccination rates in India during the vaccination drive. Twitter data, news reports, and social media posts during the MR vaccination program in India are taken into consideration for the analysis. The vaccine hesitancy is also associated with political, religious, psychological, and economic factors. Government 3.0 has got its power to overcome the misinformation in the healthcare programs.

KEYWORDS

Anti-Vaccination, Information Exchange, Information Integration, Measles-Rubella, Vaccine Hesitancy

1. INTRODUCTION

Electronic government (or e-government) essentially refers to "The utilization of Information and Communication Technologies (ICTs), and other web-based telecommunication technologies to improve and/or enhance on the efficiency and effectiveness of service delivery in the public sector, towards citizens and enterprises." (Jeong, 2007). Social media will enable the stakeholders to engage, communicate and collaborate to achieve better e-Governance (Oliveira & Welch 2013).

ICTs will make government-citizen (GC) communication more efficient and effective. Social Network Sites (SNS) have proven to be a game-changing networking tool in the healthcare sector, as well as successful in implementing healthcare programmes. At the same time SNS can also affect healthcare services. In several ways, this is posing a serious challenge to the healthcare industry. The use of social media in e-Governance applications in the health sector is in an immature stage and it is to be exploited for the information exchange (Tursunbayeva et al. 2017).

An effective Government Inter-Organizational Information Integration (GIII) faces several challenges in the form of availability of technology, infrastructure, volume of information, information

dissemination responsibility, varying official formalities, information security, privacy and lack of coordination among different organizations (Federowics et al. 2018; Yang et al. 2018). When there is a lack of coordination among the organization, there will be confusion among the citizens. The resulting rumors may spread misinformation and fake news.

A MR vaccination campaign has begun in India in order to meet the United Nations' target of sustainable development goals. The Indian government collaborated with UNICEF, the World Health Organization (WHO), and Lions Club International to bring the benefits of the MR vaccine to children aged 9 months to 15 years. According to the WHO fact sheet (WHO, 2018), immunisation prevents an estimated two to three million child deaths due to diphtheria, tetanus, pertussis (whooping cough), and measles each year. An additional 1.5 million deaths could be avoided if vaccination coverage was increased. Approximately 19.5 million infants did not receive the routine immunisation vaccine. In 2015, India was responsible for nearly 36 percent of measles-related deaths. Vaccine hesitancy is one of the top ten global health threats, according to the WHO, and it affects all countries across the globe. SNS is one of the mediums that instil vaccine hesitancy in individuals in the form of misinformation.

A SNS can be used for anti-vaccine information dissemination for publicity purposes and induce vaccine hesitancy among the users. It can also be used to combat vaccine hesitancy (Stahl et al, 2016). According to WHO officials, measles deaths in India have decreased significantly since the introduction of the measles vaccine (WHO, 2018). The effective vaccination campaign will further reduce the child's chances of dying young. According to a UNICEF (2009) survey in India, 25% of parents were unaware that vaccines could protect their children. Only 11% of parents are aware that their children should be vaccinated. Some people are concerned about the vaccines' side effects (Panda et al., 2014).

This paper will discuss the impact of misinformation in the healthcare sector and the role of GIII, as well as answer three research questions (RQ): RQ 1) What are the impacts of social media data on government healthcare programmes? RQ 2) What are the social media communication determinants that will influence information exchange? RQ 3) How can information integration and sharing help to reduce misinformation?

Misinformation was one of the factors contributed towards the decline in Kerala's vaccination rate. There will be a hidden agenda to spread misinformation, and social media is an excellent platform for doing so. The anti-vaccination campaign and misinformation linking vaccines with various diseases and side effects are primarily to blame for the rise in vaccine hesitancy among parents (Dyda et al., 2020; Byström et al., 2020).

2. THEORETICAL BACKGROUND

With the introduction of Web 3.0, the Gov 3.0 system was established by utilising Web 3.0 ICT in electronic governance. This has resulted in the emergence of Health 3.0, which employs ICT for health communication and information exchange. Web 3.0 had improved the government's healthcare programme with the help of non-governmental organisations, the general public and individual volunteers (Charalabidis et al., 2019; Aceto et al., 2020; Nam, 2016). The Inter-organizational Information Exchange (IIE) involves complex interactions and challenges in information dissemination. The cross verification of the information across various institutions requires a flawless information exchange and processing (Pardo & Tayi, 2007, Yang et al. 2012). IIE is critical in the research and the public policy formulation. Trust and privacy are the main concerns in the IIE especially when it is dealing with the healthcare information (Karlsson et al. 2017; Koskinen et al. 2020).

There are two stakeholders in the information Integration, viz. External to the government (citizen and business) and the internal (employees and government agencies). Government should educate citizens and businesses about the added values and benefits of the integration to prevent external resistance and needs to establish an effective mechanism for internal collaboration to prevent internal resistance (Jaeger & Thompson, 2003; Signore et al. 2005; Luna-Reyes et al. 2007). Information

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