

People who hesitate to take vaccines and anti-vaccination groups

Topics:

- 1) Short describe – description of Vaccine Hesitancy and Anti-vaccination groups, and their activities
- 2) Impact of Vaccine Hesitancy and Anti-vaccination groups
- 3) Determinants of vaccination hesitancy
- 4) Confidence, Complacency, Convenience Model of Vaccine Hesitancy.
- 5) Vaccine Hesitancy Monitoring – Indicators of Vaccine Hesitancy
- 6) Communication strategies to improve vaccinations
- 7) Face to face interventions to address vaccine hesitancy

1) Short describe – description of Anti-vaccination groups and Vaccine Hesitancy

Vaccines are considered to be one of the most important measure to prevent and protect population from infection diseases. They are responsible for decreasing of childhood diseases, such as smallpox, rinderpest and have eradicated polio or malaria. Nowadays, we can see big influence of antivaccination groups, which beliefs that vaccines can cause more harm than benefits to the health for people who receive them. The anti-vaccination movement can also be contributed to the demonization of vaccinations by news and entertainment outlets.

VACCINE HESITANCY DEFINITION

Vaccine hesitancy refers to delay in acceptance or refusal of vaccines despite availability of vaccination services. Vaccine hesitancy is complex and context specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence.

The scope of vaccine hesitancy does not apply:

- to situations where vaccine uptake is low because of poor availability e.g. lack of vaccine (stock outs),
- lack of offer or access to vaccines,
- unacceptable travel/distances to reach immunization clinics,
- poor vaccine program communication, etc..
- low uptake situations where lack of available services is the major factor,
- hesitancy can be present but is not the principle reason for unvaccinated
- under vaccinated members of the community.

ANTI-VACCINATION GROUP DEFINITION

The anti-vaccination movement is a loosely organized conspiracy theorist subculture that blames the medical practice of vaccinations for a wide range of health problems. The movement, to a large majority led by people with no medical or scientific qualifications (or, ironically, stripped of credentials for malpractice and fraud), is based largely on spuriously alleged short- and long-term side effects of vaccinations.

These groups harness the Internet and social media to push their views and the stories of what they call “vaccine victims”.

ANTI-VACCINATION ACTIVITIES AND SOCIAL MEDIA

How did it all begin? In 1998, Andrew Wakefield released a paper claiming to have linked the measles, mumps, and rubella (MMR) vaccine to the onset of autism. No other scientist was ever able to match Wakefield’s findings, and in the coming years, it became known that Wakefield had a financial conflict of interest. In 2010, an ethics review board found that he had falsified the data in his report, causing an immediate retraction of his original paper and revocation of his medical license. Although the article has since been retracted, the research discredited

and the author is no longer permitted to practice medicine, lingering doubts persist and in many regions of the world, MMR vaccination rates lie well below the recommended 95% uptake. Following his statement at a 1998 press conference about his now discredited (and reportedly fraudulent) research, MMR immunization rates fell (to 80% in 2004), leading to measles outbreaks.

The damage, however, was already done and the myth was spread to many different parts of the world, especially Western Europe and North America. In the UK, for example, the MMR vaccination rate dropped from 92% in 1996 to 84% in 2002. In 2003, the rate was as low as 61% in some parts of London, far below the rate needed to avoid an epidemic of measles. In Ireland, in 1999-2000, the national immunization level had fallen below 80%, and in part of North Dublin, the level was around 60%. In the US, the controversy following the publication of the study led to a decline of about 2% in terms of parents obtaining the MMR vaccine for their children in 1999 and 2000.

Even after later studies explicitly and thoroughly debunked the alleged MMR-autism link, the drop-in vaccination rates persisted. As a result, multiple breakouts of measles have occurred throughout different parts of the Western world, infecting dozens of patients and even causing deaths. In the UK in 1998, 56 people contracted measles; in 2006, this number increased to 449 in the first five months of the year, with the first death since 1992. In 2008, measles was declared endemic in the UK for the first time in 14 years.

In Ireland, an outbreak occurred in 2000 and 1,500 cases and three deaths were reported. The outbreak was reported to have occurred as a direct result of a drop-in vaccination rates following the MMR controversy. In France, more than 22,000 cases of measles were reported from 2008 - 2011. The United States has not been an exception, with outbreaks occurring most recently in 2008, 2011, and 2013.

ANTI-VACCINATION GROUP AND SOCIAL MEDIA

Anti-vaccination group use social media for spreading information about vaccination. The most frequent are Facebook, Twitter and Youtube. Social media echo chambers—where users only hear and see information that echoes their own beliefs—further energize the anti-vaccine movement. Clusters of users with opposing views rarely interact with one another, leaving little room for constructive debate. The potential for disseminating harmful health-related information through social media seems to be at an all-time high.

Online anti-vaccination authors use numerous tactics to further their agendas. These tactics include, but are not limited to, skewing science, shifting hypotheses, censoring opposition, attacking critics, claiming to be “pro-safe vaccines”, and not “anti-vaccine”, claiming that vaccines are toxic or unnatural, and more.

Voices such as Jenny McCarthy’s have proven to be influential, sweeping fear and distrust into parents’ minds by parading as “autism experts”. Social media and television talk show hosts, such as Oprah Winfrey, played a big role in this miseducation by giving credence to the campaign. This has caused vaccination rates to sustain a surprising drop in some Western countries.

Social media and anti-vaccination study:

- A study conducted in Italy found an inverse correlation between MMR vaccine coverage and internet search activity, Facebook posts, and tweets.
- The analysis of HPV vaccine-related information from 258,418 tweets sent over two years revealed that the negative representation of vaccines affected their acceptance and coverage.
- In a study of 153 YouTube videos about immunization, negative videos were more likely to receive a rating, have higher mean star ratings, and have more views.
- The most commonly discussed vaccine in this study was the HPV vaccine, which is particularly underutilized and represents an important target for interventions.

The most frequent arguments of anti-vaccination groups are:

1. No one else is at risk if I do not vaccinate my kids
2. Vaccines cause autism
3. Shedding after vaccines gets people sick
4. Most people who get sick during outbreak are vaccinated
5. Vaccines contain more mercury now than ever
6. Many people do not vaccinate their kids
7. Natural immunity is better than immunity from vaccination

The casual nature of social media has altered the doctor-patient interaction—and profoundly changed the way information is disseminated. Empowering experts and health officials to participate in discussions on social media about vaccination is critical to bridging the vaccination information gap.

2) Impact of Anti-vaccination groups and Vaccine Hesitancy

The Impact of Anti-vaccination group and Vaccine Hesitancy is:

- a) reflected in lower than expected country vaccine uptake rates and within country
- b) subgroup uptake rates though does not necessarily impact on the country's vaccination coverage if only in subgroups and pockets of unimmunized.
- c) difficult to assess precisely across the globe and regionally due to country variations in the definition and a lack of data.
- d) a complex and multilayered, social behavioral phenomenon; however, the precise level when vaccine hesitancy has a harmful impact on individuals and communities is dependent on the background epidemiologic picture

3) Determinants of vaccination hesitancy

The ECDC - commissioned literature review and qualitative study identified a wide variety of determinants of vaccine hesitancy. The term determinants of vaccination hesitancy include concepts related to barriers and enablers for uptake, reasons for vaccine refusal, beliefs and attitudes towards vaccination and system design mediated factors.

4) Confidence, Complacency, Convenience Model of Vaccine Hesitancy

Vaccine hesitancy is complex and is not driven by a simple set of individual factors. Two models were determined to be most useful. The Complacency, Convenience and Confidence (“3Cs”) model was intuitive and thus the easiest to grasp.

Confidence is defined as trust in 1) the effectiveness and safety of vaccines; 2) the system that delivers them, including the reliability and competence of the health services and health professionals and 3) the motivations of the policymakers who decide on the needed vaccines.

Complacency exists where perceived risks of vaccine-preventable diseases are low, and vaccination is not deemed a necessary preventive action.

Convenience is measured by the extent to which physical availability, affordability and willingness-to-pay, geographical accessibility, ability to understand (language and health literacy) and appeal of immunization services affect uptake.

EDUVAC Vaccination Competence – People who hesitate to



<p>CONTEXTUAL INFLUENCES</p> <ul style="list-style-type: none"> • Influences arising due to historic • Socio-cultural • Environmental • Health system/institutional • Economic • Politics factors 	<p>a) Communication and media environment b) Influential leaders, immunization gatekeepers and anti or pro vaccination lobbies c) Historical influences d) Religion/culture/gender/socio-economic e) Politics/policies f) Geographic barriers g) Perception of the pharmaceutical industry</p>
<p>INDIVIDUAL AND GROUP INFLUENCES</p> <ul style="list-style-type: none"> • Influences arising from personal perception of the vaccine or influences of the social/peer environment 	<p>a) Personal, family and/or community members experience with vaccination, including pain b) Beliefs, attitudes about health and prevention c) Knowledge/awareness d) Health system and providers-trust and personal experience e) Risk/benefit (perceived, heuristic) f) Immunization as a social norm vs. not needed/harmful</p>
<p>VACCINE/VACCINATION-SPECIFIC ISSUES</p> <ul style="list-style-type: none"> • Directly related to vaccine or vaccination 	<p>a) Risk/Benefit (epidemiological and scientific evidence) b) Introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine c) Mode of administration d) Design of vaccination program/Mode of delivery (e.g., routine program or mass vaccination campaign) e) Reliability and/or source of supply of vaccine and (or vaccination equipment f) Vaccination schedule g) Costs h) The strength of the recommendation and/or knowledge base and (or attitude of healthcare professionals</p>

Vaccine Hesitancy Matrix has determinants arranged in three categories: *contextual, individual and group* and *vaccine /vaccination-specific influences* (Table 1)

5) Vaccine Hesitancy Monitoring – Indicators of Vaccine Hesitancy

Every immunization program needs to regularly determine if and where pockets of under-immunized subgroups occur in the country as part of good management practice.

- Coverage
- Measuring demand

WHO use for testing of vaccine hesitancy indicators Joint Reporting Form. The proposed process JRF indicator determines if regular assessment for vaccine hesitancy is taking place and the indicator serves as a reminder of good program practices and an advocacy tool.



EDUVAC Vaccination Competence – People who hesitate to take vaccines and Anti-vaccination groups



Indicators of Vaccine Hesitancy proposed for inclusion in the JRF are:

- ***Etiologic Indicator: Reasons for vaccine hesitancy:***

Question 1: What are the top three reasons for not accepting vaccines according to the national schedule?

Question 2: Is this response based or supported by some type of assessment, or is it an opinion based on your knowledge and expertise?

- ***Process Indicator: % of countries that have assessed the level of hesitancy or refusal among the public at national or sub-national level?***

Question 1: Has there been some assessment of vaccine hesitancy or refusal among the public at national or sub-national level?

Question 2: If yes, please provide assessment title(s) and reference(s) to any publication/report.



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