

Comparing COVID Vaccine with INFLUENZA Vaccine

using Vigiaccess.org database (WHO database)

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Datasource : <https://Vigiaccess.org>

COVID 19 vaccine data : Input : COMIRNATY

FLU vaccine data ; Input : FLU (INFLUENZA)

Signal Detection :

On January 29th of 2021 the CDC released a document titled 'Vaccine Adverse Event Reporting System (VAERS) Standard Operating Procedures for COVID-19' (for official use only) which announced the CDC's intention:

*"CDC will perform **Proportional Reporting Ratio (PRR)** analysis [...], excluding laboratory results, to identify AEs that are disproportionately reported relative to other AEs. [...] To determine if results need further clinical review, consider if clinically important, unexpected findings, seriousness, specific syndrome or diagnosis rather than non-specific symptoms"(CDC, 2022-09-26)*

Alas, the CDC never followed up on their promise or at least they did not release their results, so I am going to use the CDC's signal detection method here, and see what they should have told us.

PRR calculates the percentage of reports with a particular symptom following administration of drug A, and sees if this varies significantly from the percentage of reports with a particular symptom following administration of drug B.

The difference is significant if –

1. $(\text{percentage for drug A})/(\text{percentage for drug B}) > 1$
2. Number of reports of symptom > 3 for both drugs
3. The lower limit for the 95% confidence interval of the ratio > 1

All these criteria are satisfied in the study that follows.

Here are the reported side effects for COVID-19 Vaccines in the Vigiaccess.org database

- Blood and lymphatic system disorders (2%, 223 122 ADRs)
- Cardiac disorders (3%, 313 578 ADRs)
- Congenital, familial and genetic disorders (0%, 3 894 ADRs)
- Ear and labyrinth disorders (1%, 146 409 ADRs)
- Endocrine disorders (0%, 12 001 ADRs)
- Eye disorders (1%, 164 673 ADRs)
- Gastrointestinal disorders (7%, 862 685 ADRs)
- General disorders and administration site conditions (26%, 3 117 221 ADRs)
- Hepatobiliary disorders (0%, 12 028 ADRs)
- Immune system disorders (1%, 72 931 ADRs)
- Infections and infestations (5%, 626 418 ADRs)
- Injury, poisoning and procedural complications (3%, 346 755 ADRs)
- Investigations (6%, 783 151 ADRs)
- Metabolism and nutrition disorders (1%, 97 919 ADRs)
- Musculoskeletal and connective tissue disorders (10%, 1 264 145 ADRs)
- Neoplasms benign, malignant and unspecified (incl cysts and polyps) (0%, 14 720 ADRs)
- Nervous system disorders (16%, 1 924 477 ADRs)
- Pregnancy, puerperium and perinatal conditions (0%, 13 513 ADRs)
- Product issues (0%, 10 534 ADRs)
- Psychiatric disorders (2%, 241 586 ADRs)
- Renal and urinary disorders (0%, 44 293 ADRs)
- Reproductive system and breast disorders (2%, 273 044 ADRs)
- Respiratory, thoracic and mediastinal disorders (4%, 532 713 ADRs)
- Skin and subcutaneous tissue disorders (5%, 583 777 ADRs)
- Social circumstances (0%, 45 367 ADRs)
- Surgical and medical procedures (1%, 116 240 ADRs)
- Vascular disorders (2%, 234 892 ADRs)

Here are the reported side effects for FLU (INFLUENZA) Vaccines in the Vigiaccess.org database

- Blood and lymphatic system disorders (1%, 6 821 ADRs)
- Cardiac disorders (1%, 7 077 ADRs)
- Congenital, familial and genetic disorders (0%, 317 ADRs)
- Ear and labyrinth disorders (1%, 5 049 ADRs)
- Endocrine disorders (0%, 293 ADRs)
- Eye disorders (2%, 12 377 ADRs)
- Gastrointestinal disorders (6%, 43 536 ADRs)
- General disorders and administration site conditions (29%, 195 187 ADRs)
- Hepatobiliary disorders (0%, 810 ADRs)
- Immune system disorders (1%, 9 032 ADRs)
- Infections and infestations (5%, 32 315 ADRs)
- Injury, poisoning and procedural complications (5%, 34 447 ADRs)
- Investigations (4%, 28 922 ADRs)
- Metabolism and nutrition disorders (1%, 6 366 ADRs)
- Musculoskeletal and connective tissue disorders (9%, 63 176 ADRs)
- Neoplasms benign, malignant and unspecified (incl cysts and polyps) (0%, 546 ADRs)
- Nervous system disorders (12%, 83 470 ADRs)
- Pregnancy, puerperium and perinatal conditions (0%, 998 ADRs)
- Product issues (0%, 1 319 ADRs)
- Psychiatric disorders (2%, 12 803 ADRs)
- Renal and urinary disorders (0%, 2 788 ADRs)
- Reproductive system and breast disorders (0%, 1 054 ADRs)
- Respiratory, thoracic and mediastinal disorders (6%, 39 436 ADRs)
- Skin and subcutaneous tissue disorders (10%, 67 620 ADRs)
- Social circumstances (1%, 3 915 ADRs)
- Surgical and medical procedures (1%, 3 846 ADRs)
- Vascular disorders (2%, 14 303 ADRs)

Computation of PRR Ratio

Disorder	Covid 19 vaccine	Flu vaccine (Influenza)	PRR
Reproductive	273044	1054	15.60
Cardiac	313578	7077	2.67
Endocrine	12001	293	2.47
Blood & Lymphatic	223122	6821	1.97
Ear	146409	5049	1.75
Cancer	14720	546	1.62
Nervous system	1924477	83470	1.39
Musculoskeletal	1264145	63176	1.20
Intestinal	862685	43536	1.19
Infection	626418	32315	1.17
Psychiatric	241586	12803	1.14
Vascular	234892	14303	0.99
Kidney	44293	2788	0.96
Metabolism	97919	6366	0.93
Liver	12028	810	0.89
Pregnancy	13513	998	0.82
Respiratory	532713	39436	0.81
Eye	164673	12377	0.80
Skin	583777	67620	0.52
Immune system	72931	9032	0.49
Total Records	5188403	312445	

Discussion

COVID 19 vaccine has high PRR ratio relative to FLU vaccine for symptoms of Reproductive disorder.

The PRR ratio is very large (15.6) indicating that the percentage of COVID-19 vaccine reports involving disorders of the reproductive system is 15 times larger than the percentage of FLU vaccine reports involving disorders of the reproductive system.

Similarly the percentage of reports of COVID vaccination with cardiac disorders is 2.6 x the percentage of reports of FLU vaccination with cardiac disorders.

These results are significant at the 95% Confidence interval, demonstrating that reproduction is impaired in the COVID vaccinated significantly more than in the FLU vaccinated. Heart injury and cancer rates are also significantly increased.

Deeper Analysis

To understand how reproduction is impaired, we can take a closer look at the symptoms included under “Reproductive Disorders”

The WHO lists the following reproductive symptom counts for COVID-19 vaccinations

Heavy menstrual bleeding (69 666)
Menstrual disorder (49 727)
Menstruation irregular (39 264)
Dysmenorrhoea (34 214)
Menstruation delayed (30 723)
Intermenstrual bleeding (28 200)
Amenorrhoea (23 874)
Polymenorrhoea (21 270)
Vaginal haemorrhage (12 459)
Breast pain (12 283)
Postmenopausal haemorrhage (8 835)
Oligomenorrhoea (8 574)
Hypomenorrhoea (5 303)
Menometrorrhagia (3 599)
Pelvic pain (3 266)
Breast swelling (3 203)
Premenstrual syndrome (2 972)
Abnormal uterine bleeding (2 802)
Breast tenderness (2 329)
Menstrual discomfort (2 249)
Erectile dysfunction (2 090)
Adnexa uteri pain (1 699)
Breast mass (1 625)
Premenstrual pain (1 407)
Endometriosis (1 298)

Let us take heavy menstrual bleeding as an example

WHO recorded 69666 cases of heavy menstrual bleeding following COVID 19 vaccination, and 79 cases following FLU vaccination. So the percentage of COVID 19 reports with heavy menstrual bleeding is $69666/5188403 = 1.34\%$. In comparison the percentage of FLU reports with heavy menstrual bleeding is $79/312445 = 0.025\%$. The PRR ratio $1.34 : 0.025$ or $53 : 1$. So you can see that there is a massive difference in reproductive disorder between these two vaccines.

Please note that I have not included all the different counts of menstrual disturbance listed above, only the first one. If I included all of them, the PRR would be much greater.