

## Author Correction: Predicting COVID 19 Spread in Pakistan using the SIR Model

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**Correction to:** *Journal of Pure and Applied Microbiology* <https://doi.org/10.22207/JPAM.14.2.40>, published **May 9, 2020**.

The error has not been corrected in the PDF or HTML versions of the article.

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Published: March 01, 2021

**Citation:** Shah STA, Mansoor M, Mirza AF, et al. Author Correction: Predicting COVID-19 Spread in Pakistan using the SIR Model. *J Pure Appl Microbiol.* 2021;15(1):462-463. doi:10.22207/JPAM.15.1.44

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When revisiting the values of Beta, Gamma and  $R_0$  in our article, we the listed author(s) have found some errors and here we are pointing out some unintentionally leftover irregularities, typos and mistakes which should be corrected to justify and validate the values of Beta, Gamma and  $R_0$ , as per the differential equations.

Hereby, we bring to your attention the following irregularities, typos, and mistakes in Table 2 Page 1426<sup>1</sup>.

In the original paper, the equations (given below 1 to 4) and Table 2 must read as:

The rate of susceptible people is calculated for a population using Eq. (1) and the description of the parameters is provided in Table 1<sup>1</sup>:

$$\frac{d(S)}{d(t)} = -\frac{\beta SI}{N} \quad \dots(1)$$

The Infection rate is calculated by Eq. (2)

$$\frac{d(I)}{d(t)} = \frac{\beta SI}{N} - \gamma I \quad \dots(2)$$

The recovery rate is calculated by Eq. (3)

$$\frac{d(R)}{d(t)} = \gamma I \quad \dots(3)$$

The death rate is calculated by Eq. (4)

$$\frac{d(D)}{d(t)} = \frac{2I}{100} \quad \dots(4)$$

Table 2. Prediction with different Gamma ( $\gamma$ ) and Beta ( $\beta$ ) value using SIRD Model

Cases	Beta ( $\beta$ )	Gamma ( $\gamma$ )	$R_0$	Prediction with different Gamma ( $\gamma$ ) and Beta ( $\beta$ ) value							
				End of April				End of May			
				S	I	R	D	S	I	R	D
Data 1	0.0892282	0.0584039	1.5277789	219977780	14553	7357	310	219911491	37275	50440	794
Data 2	0.0992282	0.078404	1.2656012	219977512	12656	9563	269	219923360	23960	52170	510
Data 3	0.1992282	0.078404	2.5410464	219960072	26677	12683	568	218486614	907007	587053	19326
Data 4	0.0892282	0.078404	1.1380563	219978738	11700	9313	249	219940445	16327	42881	347

## References

1. Shah STA, Mansoor M, Mirza AF, et al. Predicting COVID-19 Spread in Pakistan using the SIR Model. *J Pure Appl Microbiol.* 2020;14(2):1423-1430. doi:10.22207/JPAM.14.2.40