

Calculation of excess COVID-19 deaths in the gas exposed population

S.No	Item	Numbers	Source
1	POPULATION OF BHOPAL DISTRICT IN 2020	28,00,000	Census data
2	No of people injured by gas exposure	5,68,293	Office of the Welfare Commissioner-Bhopal gas victims
3	Less Estimated No of Deaths in the years following the disaster (20,000)	20,000	Information based Estimates
4	Less Estimated No of persons who migrated out of the district. (15% of 5,68,293)	85,243	Estimated
5	POPULATION OF GAS VICTIMS IN BHOPAL DISTRICT IN 2020	4,63,050	
	No of COVID 19 deaths in Bhopal District	450	Corona Health Bulletin of Dept of Health & Family Welfare, Govt of MP- as 18 October 2020
6	No of COVID 19 deaths of gas exposed persons in Bhopal District	254	BMHRC Smart card or compensation order copy
7	Applying District's COVID 19 death rate to gas exposed population Number of COVID 19 deaths expected in a population of 463050 (463050X450deaths/28lakhs)	74	
8	Excess deaths attributable to Exposure to Union Carbide's gases (254-74)	180	

Bhopal COVID 19 Mortality Rates

	COVID-19 Death	Total Population	Death/100000 Population
Gas Exposed	254	4,63,050	54.85
Non Gas Exposed	196	2,336,950	8.39
Total	450	28,00,000	

COVID 19 Mortality rate among Gas Exposed is $54.85/8.39 = 6.54$ times more than mortality rate in non gas exposed population.

$$\frac{4,63050 \times 254}{100000}$$