

other rates : vital rates (1)



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- Birth rate: number of births @1000 people
- **Birth rate** = $\text{births} / \text{population} \times 1000$
- Death rate: number of deaths @1000 people
- **Death rate** = $\text{deaths} / \text{population} \times 1000$
- Case fatality rate: number of cases that end up in death;
- **CFR** = $\text{deaths from a cause} / \text{diseased} \times 100$
- **Proportionate mortality rate (PMR)** = $\text{deaths from a cause} / \text{all deaths} \times 100$

other rates:vital rates(2)



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- Fertility rate=number of children / fertile woman
- **Fertility rate** = births / women of childbearing age(15-49) x1000
- **Infant mortality rate** : deaths 0-1 yo from 1000 live births; neonatal 0-28day, perinatal: 28days-1 year
- **IMR** = deaths 0-1 yo / live births x1000

Vital rates in epidemiology:



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	BIRTHS	DEATHS	DISEASES
Total population /1000	Birth rate	Death rate	Incidence (new) Prevalence (all)
Groups of population: infants/ mothers /100,000		IMR MMR	
Groups of population: diseased/ dead /100		CFR PMR	