

## Important Vocab for the Editorial

1. **cut** (verb) – reduce, decrease, lessen.
2. **vaccine** (noun) – a biological preparation that improves immunity to a particular disease.
3. **in short supply** (phrase) – not enough, scarce, insufficient, deficient, inadequate.
4. **curtail** (verb) – decrease, lessen, reduce.
5. **on paper** (phrase) – in theory, theoretically, hypothetically, supposedly.
6. **amid** (preposition) – in the middle of, surrounded by; during.
7. **so far** (phrase) – until now, up to the present, up to this point.
8. **dose** (noun) – an amount/quantity of something.
9. **consumption** (noun) – utilization, use, using up.
10. **administer** (verb) – dispense, provide, give, apply (a drug/vaccine).
11. **build into** (phrase) – incorporate into, include in, embody in, absorb into, subsume into.
12. **vaccination** (noun) – treatment with a vaccine to protect against a particular disease; immunization.
13. **Wastage Factor** (noun) – the factor (number) that you multiply your estimated vaccine needs by, in order to allow for some doses being wasted.
14. **Multiplier Factor** (noun) – the number by which a multiplicand is multiplied (multiplicand is the name given to a number being multiplied by another number).
15. **programmatic** (adjective) – according to a programme/schedule.
16. **factor into** (phrasal verb) – take into account, take into consideration, consider.
17. **vial** (noun) – a small glass container (with liquid drug/vaccine).
18. **due to** (phrase) – because of, owing to, on account of, as a result of.
19. **expose** (verb) – subject to something, leave unprotected from.
20. **bounds** (noun) – limits, limitations.
21. **suspected** (adjective) – suspicious, sceptical, doubtful, cynical.
22. **contamination** (noun) – the presence of a impurity.
23. **relative** (adjective) – comparable, correlative, corresponding; reasonable, a fair degree of, considerable.
24. **proportions** (noun) – scale, range, volume, magnitude.
25. **fragile** (adjective) – easily broken/destroyed.

26. **ought to** (modal verb) – must, should.
27. **infrastructure** (noun) – the basic physical or organisational structure for something (to function properly).
28. **end up** (phrasal verb) – come/appear, find oneself (to a particular course of action in the end).
29. **translate** (verb) – change, convert, transform.
30. **exponential** (adjective) – rapid, quick.
31. **logistics** (noun) – the process of planning & executing a complex operation; organization, planning, management, arrangement.
32. **ancillary** (adjective) – additional, extra.
33. **enable** (verb) – make possible, allow, facilitate.
34. **speedy** (adjective) – rapid, swift, quick, fast.
35. **rollout** (noun) – official launch/introduction.

### **Shortage and wastage: On cutting vaccine wastage**

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#### **With vaccines in short supply, more effort must go into curtailing wastage**

In the days ahead, **Indian adults below 45 will begin registering for a COVID vaccine** that on paper will be available from May 1. Amid a crisis of vaccine supply, the Health Ministry had said that a little **over one crore vaccines remain in stock with States**. An additional 57 lakh would be made available to States over the weekend. The Centre has so far provided nearly 16 crore vaccine doses to States of which the total consumption including wastage is 14.8 crore doses. Maharashtra led the table of vaccines administered with 1.5 crore doses followed by Rajasthan (1.3 crore), Uttar Pradesh (1.25 crore) and Gujarat (1.23 crore). These were also the States that had so far received the maximum number of vaccines, again in that order. Among large States, **Tamil Nadu reported a high percentage of vaccine wastage**, nearly 8.83%. Only Lakshadweep had a higher 9.76%. Assam, Manipur and Haryana ranked after Tamil Nadu in percentage wastage of vaccines, at 7.7%, 7.4% and 5.72%. The Andaman and Nicobar Islands, Arunachal Pradesh, Goa, Himachal Pradesh, Kerala, Mizoram, Odisha were the States that had reported no wastage.

That a certain number of vaccines will be wasted is built into the Centre's planning process. In its operational guidelines on COVID-19 vaccination, the Wastage Multiplier Factor has been calculated at 1.11, assuming an allowable programmatic wastage of 10%. This number is factored into how many vials are allocated to States for supply of vaccine to each administrative unit. Wastage in unopened vials can occur due to reasons such as the vaccine reaching its destination after its expiry date; if it has been exposed to temperature outside its normal bounds; suspected contamination and poor vaccine administration practices. Data seem to suggest that six of the top States or Union Territories that are reporting the highest proportion of wastage are the northeastern States, Lakshadweep and Dadra and Nagar Haveli where the relative difficulty of transporting goods — especially those as fragile as vaccine vials — is known. There ought to be deeper analysis for why Tamil Nadu with above average medical infrastructure ends up wasting close to 9% of its vaccines even though it is within acceptable bounds. In the days ahead, there will be more vaccines and manufacturing facilities which could translate to shorter transportation distances and reduced wastage. With the exponential increase in vaccine demand expected in the next six months, there will also be challenges in administration and demand for skilled administrators who will be part of the management of logistics. These ancillary support staff too have to be developed by States along with planning for vaccine supply to enable a smooth, speedy rollout.