# Experimental therapies, the media and clinician

## Media reports on investigational COVID-19 therapies do not often provide a balanced view. This presents a challenge to clinicians

The urgent unmet medical need for effective therapies for COVID-19 has led to quick completion and wide dissemination of trial results in the media. This leads patients to pressurize physicians to prescribe experimental therapies. However, the use of such investigational therapies for a serious pandemic is fraught with risk. Hence, the clinician should develop the ability to judge the relevance of media reports through a critical review of:

- **Content –** Stories containing words such as cure, miracle, breakthrough, promising, dramatic, game-changer, magic, panacea etc. describing drug efficacy are for boosting the sale of a new drug or the company's image. Such claims should be taken with a pinch of salt! Balanced reports covering information on the risks and benefits of the therapy and explaining absolute vs relative risk and various unknowns and uncertainties would be valuable for clinicians.
- **Type of study –** Reports of lab, in-vitro, or animal studies are not helpful for medical practice. Announcement of regulatory approval for conducting a trial is not useful. Results of pilot or preliminary studies cannot be relied on to prescribe experimental therapy.
- **Study design –** Results of trials that are observational or retrospective, open - unblinded, non-randomised, not compared with control – placebo, standard care, other drugs – do not provide adequate evidence of the efficacy of a new therapy.
- **Outcome –** Clinical trial reporting efficacy assessment based on subjective endpoints e.g., symptomatic recovery is less reliable than that based on objective endpoints e.g., need for oxygen, mortality.
- **Population –** Studies in mild COVID-19 patients, who would recover with symptomatic treatment do not support claims of efficacy.
- **Sample size –** Well established COVID-19 treatments – dexamethasone, remdesivir - were studied in a large population - more than 1000 patients. Statistically valid sample size is essential for assessing the efficacy of any experimental therapy. The clinician should be skeptical about media stories based on trials on a small number of patients.
- **Approval –** If the news report cites approval or acceptance of new therapy by health authorities or World Health Organisation, the value of information is enhanced.
- **Source –** Media reports of clinical trials conducted by renowned academic centers are more credible compared to industry-sponsored studies. A press release from a well-known international company is usually more reliable compared to information from a small biotechnology company.
- **Publication –** Stories based on clinical trials published in international reputed journals are of good quality.

A plethora of perplexing media reports of clinical trials of therapies makes it essential for a physician to educate herself about understanding the relevance of a published trial. The clinician can browse the introduction section of the publication to appreciate the scientific rationale and objectives of the trial. Reading the discussion is extremely informative as it describes the summary of key results, puts findings in the context of the totality of the relevant evidence — considering the influence of confounders and bias, explains the limitations of the study, and links the conclusions with the objectives of the clinical trial. Editorial commentary on the trial is of immense value in understanding its relevance to practice.

An infodemic requires the clinician to become an academic in evaluating the quality and utility of media messages!

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