

Help Patients Understand Pitfalls of Preliminary Data

The ongoing race to prevent and treat COVID-19 is raising **questions about "preprint" reports and other preliminary data.**

Preprints are early versions of articles posted online BEFORE peer review or editing. "Early release" or "online first" articles are different...they go through full review before publication.

Point out that peer review is a key step to evaluate if study methods and conclusions are appropriate...and to help keep weak or faulty data from being distributed. This limits misinformation.

Medical preprints are available for free from sites such as medRxiv.org...which currently has almost 13,000 COVID-19 articles. But fewer than 2 in 10 preprints on medRxiv.org make it to full publication.

Press releases or abstracts presented at scientific meetings can also be problematic. For example, AstraZeneca released early efficacy data on their COVID-19 vaccine...which they then downgraded days later.

Caution patients to take news headlines and social media posts with a grain of salt.

Remind patients how preliminary data from a small study with hydroxychloroquine stirred enthusiasm...but more robust trials later showed it doesn't improve COVID-19 outcomes and can cause harm.

Take a "buyer beware" approach...especially if all you have are preliminary data. Be ready to change your practice as evidence evolves.

Look for red flags suggesting data may be unreliable...such as reporting interim results or outcomes of just a few patients.

And check for signs of rushed reporting, including typos...errors in data tables..."fuzzy math"...or "lost" study patients.

Be leery if study limitations aren't described. Unexplored factors (bias, missing data, etc) may impact results.

Review our chart, *Treatments of Interest for COVID-19*, for an objective evaluation of meds studied for prevention or treatment.

Key References:

- JAMA 2020;324(18):1901-3
- JAMA 2020;324(18):1903-5
- JAMA 2020;324(18):1840-3
- www.medrxiv.org/about/FAQ (4-23-21)

Pharmacist's Letter. May 2021, No. 370505

Cite this document as follows: Article, Help Patients Understand Pitfalls of Preliminary Data, Pharmacist's Letter, May 2021

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