



Highlights from the Aerosol Therapy Device Use During COVID-19 Survey

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Background:

During the COVID-19 pandemic, we realized that there was a lack of scientific evidence regarding whether nebulizer treatments increased transmission of coronaviruses (or other infectious disease agents). The COPD Foundation-led (COPDF) Nebulizer Consortium (CNC) was established in response to the COVID-19 pandemic to improve the understanding of safe administration of nebulized therapy and provide any necessary education to patients, caregivers, and health care professionals. A survey was conducted by the CNC to better understand concerns surrounding the use of aerosol device.

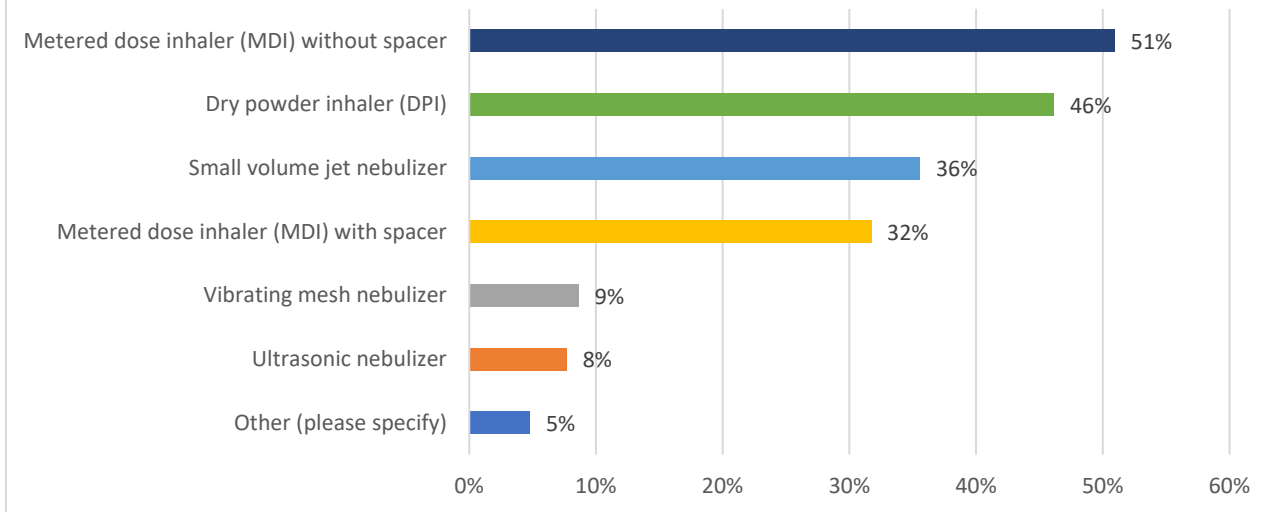
Methods:

The survey was conducted between Jan 2021 and Mar 2021 in the COPDF's patient and medical communities (COPD360social, PPRN, Facebook, COPDF Praxis and CNC Newsletters). The survey consisted of 6 questions for patients/caregivers and 7 questions for healthcare providers. The questions for patients were about the type of aerosol devices they used, where they used them and if they made changes to how they used aerosol devices due to concerns about COVID-19 transmission. They were also asked if they or someone they lived with had been diagnosed with COVID-19 and whether they had received a COVID-19 vaccine. Healthcare providers were asked about the patient populations seen, aerosol devices used and whether their institutions considered aerosol therapy an aerosol generating procedure. They were also asked if they had concerns regarding COVID-19 transmission during the use of aerosol generating devices and if their institutions had made any changes to reduce concerns of COVID-19 transmission.

Results:

Of the 145 responses received, 104 (72%) were from patients or caregivers and 41 (28%) were from health care professionals. The two most commonly used devices identified by patients and caregivers were metered dose inhalers without a spacer and dry powder inhalers, followed by small volume jet nebulizers and metered dose inhalers with spacers. [Fig 1]

Figure 1: Which aerosol devices do you use at home?

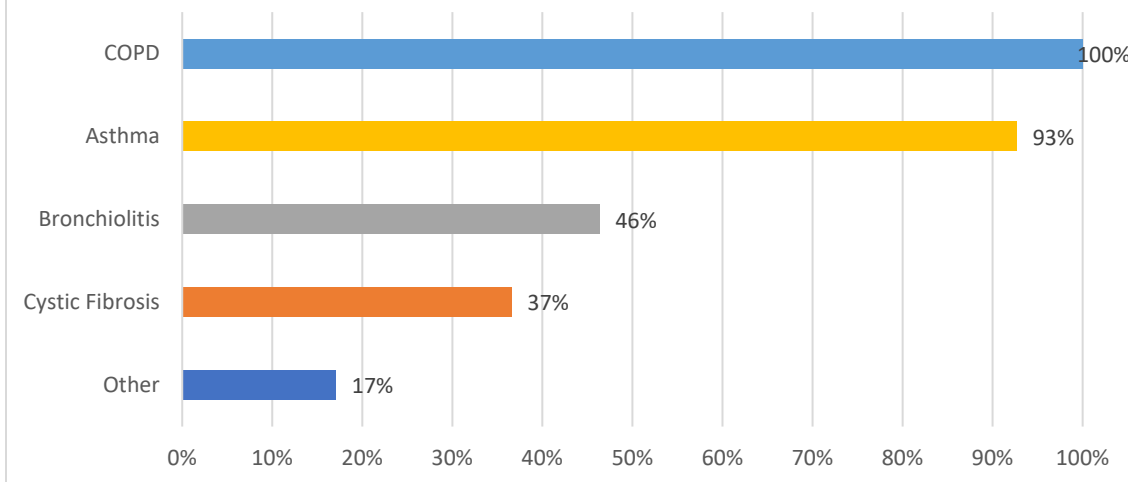


Almost all (97%) of patients/caregivers responding reported using their inhaled medications indoors.

Fifteen individuals identifying as patients or caregivers reported being diagnosed with COVID-19, three of whom reported someone they lived with being diagnosed with COVID-19. Over half (55%) had received a COVID-19 vaccine. Only 3% of patients and caregivers reported making any changes to how they used their aerosol medications due to concerns of COVID-19 transmission.

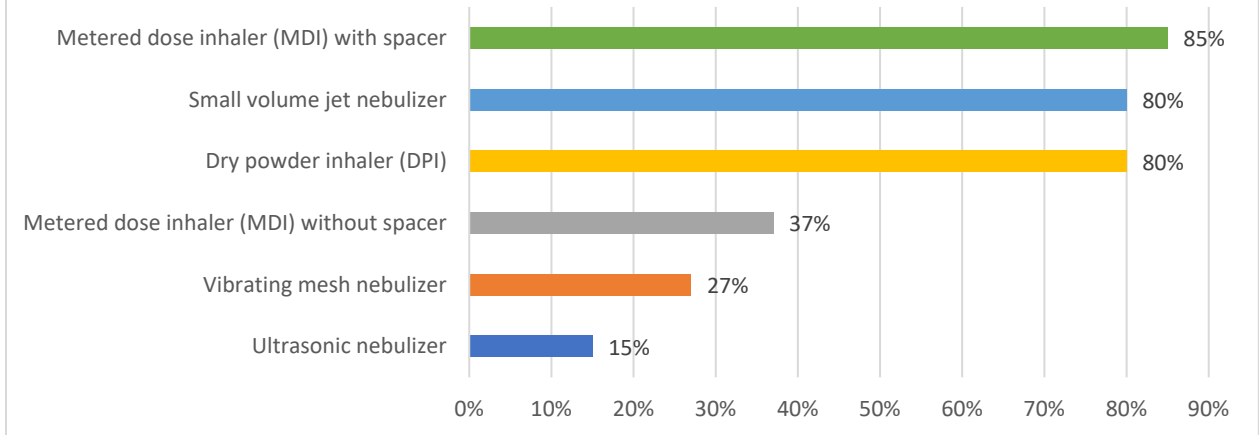
All of the healthcare providers administered aerosol therapies to patients with COPD and most to patients with asthma. [Fig 2]

Figure 2: To which patient populations do you administer aerosol therapy?



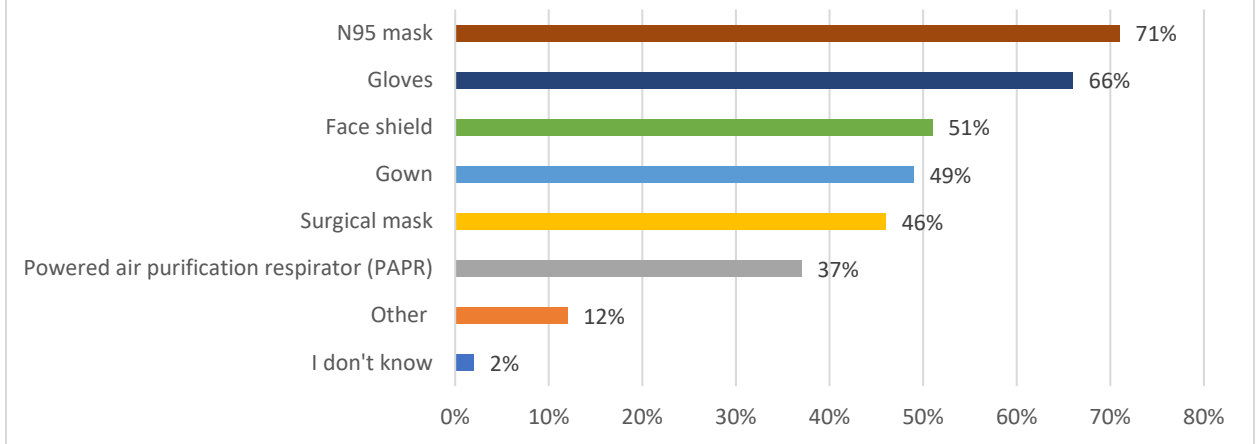
Healthcare providers reported using a variety of aerosol devices, with metered dose inhaler with a spacer, dry powder inhaler and small volume jet nebulizer being the most frequently used. [Fig 3].

Figure 3: Which aerosol device do you use for patients?



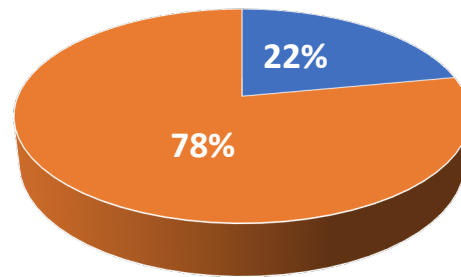
The majority (85%) of healthcare providers stated their institutions considered aerosol therapy as an aerosol generating procedure (AGP) with only 1 person reporting this was not the case, 12% did not know. For those where it is considered an AGP, many forms of personal protective equipment are used [Fig 4].

Figure 4: What type of PPE do you wear when delivering aerosol therapy to patients?



Most healthcare providers (78%) expressed some level of concern about the transmission of COVID-19 during the use of AGP. (Fig 5)

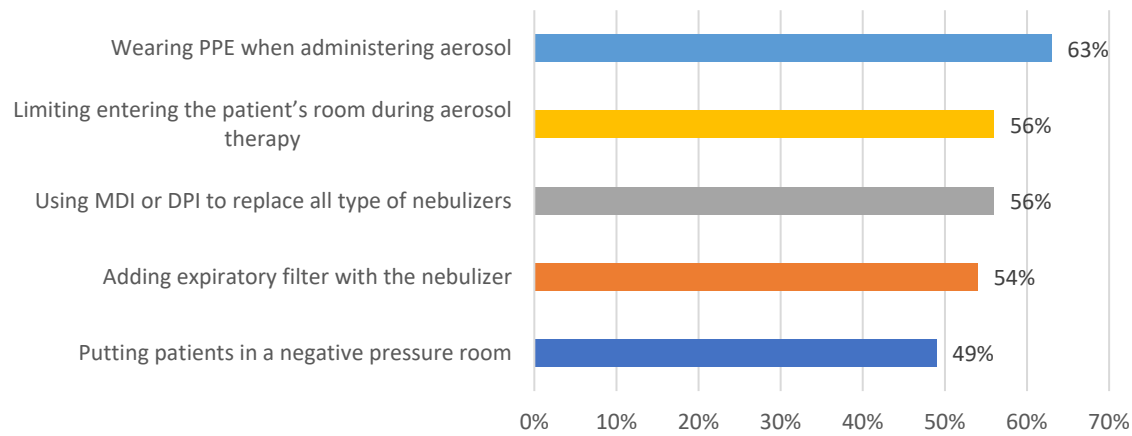
Figure 5: Do you have concerns about COVID-19 transmission during use of aerosol generating devices?



■ No major concerns ■ At least a little bit

Most people (85%) reported that their institutions had taken additional measures to try to prevent the transmission of COVID-19 during AGPs with 56% replacing use of all nebulizers with MDIs or DPIs. [fig 6].

Figure 6: What measures have been used at your institution to reduce the transmission of COVID-19?



Key Takeaway Messages:

- Many institutions replaced use of all nebulizers with MDIs and DPIs, the impact of these changes will need further research.
- Patients and caregivers were much less concerned about the risk of COVID-19 transmission when using aerosol therapy compared to healthcare providers.
- Over half of the patients who received aerosol therapy at home used metered dose inhaler without a spacer.