**Podcast 3**

 **ATS guidelines in COPD: When is one therapy not enough?**

Richard ([00:04](https://www.rev.com/transcript-editor/Edit?token=QyqN-cxvwvptLXMXY-yj-91nsnBWZMp4Tt4Dtqj4NJpBRSoE5M4vcI8rOMqgtGYW0tlvuqWKvyunRTE45yen9rF7dc4&loadFrom=DocumentDeeplink&ts=4.1)):

This podcast is intended for healthcare professionals outside the United Kingdom only.

Richard ([00:23](https://www.rev.com/transcript-editor/Edit?token=pGeXYiK-PGoL3k63FwWYakfz-zcpLEALCnGPSKWmiUgKuVUL2z7fxx-el7SB8SYkz1UIDpv6RNwEozcz6gjvLqnahU0&loadFrom=DocumentDeeplink&ts=23.33)):

Welcome to the Medical Insider COPD by Boehringer Ingelheim, a podcast offering a breath of fresh air to clinicians treating COPD across the globe. My name is Dr. Richard Russell. I'm a consultant chest physician at Lymington New Forest hospital in the United Kingdom, a senior clinical researcher at the University of Oxford and also the Editor in Chief of the International Journal of COPD. It's a great pleasure for me to be your moderating host for this season of Medical Insider COPD podcast series. I'm here to bring news insights in COPD, right from the source directly to you.

Richard ([00:57](https://www.rev.com/transcript-editor/Edit?token=yeywJFS81zcFr6z_qHiGtKkM2QThKRd-k4yJnKYpcx7fLwVdjVn7MkL-TjI2uR4X4Ye9ZI9Wx0xbWC4GzYmuHqeWRi8&loadFrom=DocumentDeeplink&ts=57.22)):

Thank you for joining us today. Be sure to subscribe and follow Medical Insider COPD to ensure that you do not miss any of the exciting podcasts in this series. Today, we'll delve into a publication we believe is worth reading, especially looking at the role of patients in selecting which inhalers is best for them. We're also going to look at an emerging, exciting topic from social media, particularly focusing on air pollution and maybe the impact of COVID on this. But first I'm proud and excited to introduce today's guest, who'll be here with me to discuss the new ATS guidelines on management of COPD. Professor Michael Dreher. Welcome Michael.

Michael ([01:31](https://www.rev.com/transcript-editor/Edit?token=x2_AD6U-XPW8MKgCp0rtm0LeiMwZ-R4YZvIkLG5H6hRK6UAzCElZ0qPDvl60rXUQDR_jCTY_K5ICNHHxJTGdD83X-Jo&loadFrom=DocumentDeeplink&ts=91.43)):

Hi.

Richard ([01:31](https://www.rev.com/transcript-editor/Edit?token=XjKZKGlyKAXGAlLv_x29iH0vMtKJSgrxz9aRzypXXG8frBFwsLzderioAj3i4q6DhRU2dTVacgqpk_bvo8_OGFEr9l4&loadFrom=DocumentDeeplink&ts=91.97)):

So Michael, tell the audience a little bit about yourself.

Michael ([01:34](https://www.rev.com/transcript-editor/Edit?token=SZ8iq6vIRa5WmWt5q4VIXqm7w5U9WdX2GX1qxUqCz8Se_NVSDb18JVJkkkLsuQI9EeoBOprfX0YdfXuAg644vKZatXo&loadFrom=DocumentDeeplink&ts=94.35)):

I would love to. Hi everybody. My name is Michael Dreher. I'm a respiratory pulmonologist from Germany. I am Head of the Department of Pneumology and Intensive Care Medicine at the University Hospital in Aachen, Germany. My scientific interest is related to COPD and it is a great pleasure for me to be here together with you, Richard, and talk about the new ATS guidelines in COPD.

Richard ([01:57](https://www.rev.com/transcript-editor/Edit?token=JkhAVdlFO6od8ySlxZvgEbmsPfpyEvR2ZYA2ZIkrM6xy6xYrTfABNnLN90MWWSBDV-f9p5sLCWzwWyBDzje3EmSOxbE&loadFrom=DocumentDeeplink&ts=117.29)):

Excellent. I'm very much looking forward to this today and spending some time with you. So before we start particularly talking about this guideline, why do you think we really need guidelines? And what role do they play in how we manage diseases such as COPD?

Michael ([02:09](https://www.rev.com/transcript-editor/Edit?token=BzgUnIvCVHNK_1b1CcH_QVJpIQmS3NLDMaMDi3BiCr7Cxsg-Y-94FxLHEf4m7Ocdwiwq3sBLroPqykSW2LyJZsD-wEc&loadFrom=DocumentDeeplink&ts=129.99)):

I think this is a good question, Richard, and first of all, it is important to remember that COPD is one of the major leading diseases worldwide regarding morbidity and mortality. With this in mind, I definitely think we need to provide clinicians with standardized guidelines on the treatment of COPD. This assures us that we provide the best medicine for an individual patient, and we came away from treating every patient with the same drug combination towards a more personalized medicine. I think we will talk later in this podcast, for example, about if or not to use an inhaled corticosteroid, which is a perfect example towards an individualized treatment approach.

Richard ([02:52](https://www.rev.com/transcript-editor/Edit?token=PwFj12BUkhENpFzQ6jsnbwv0Y0vHK3QHXqz3u6p0OSpe3GRjIuPo0Xpm5X07XWVNBiyzcEVSJV8tZi63-prtLyRuc6M&loadFrom=DocumentDeeplink&ts=184.98)):

I found this guideline interesting and easy to read. It's clearly evidence-based with evidence that’s been appraised, rated then graded, but also the recommendations it makes are very practical in their approach. Can you tell us a bit about that?

Michael ([03:07](https://www.rev.com/transcript-editor/Edit?token=4-TtjU1v_EThfCnAkZ-PPHzCJ_SWUGhR1Ke5l2p-0laKxkPblFFvx-hxBY_pEycyFISq27XtZXOWKXJ_dWqIu25ZHTg&loadFrom=DocumentDeeplink&ts=198.43)):

Of course, maybe first of all, I would like to point out what we are talking about and how the guideline is called, because I think this is important as well. So we are talking about the pharmacologic management of chronic obstructive pulmonary disease, which is an official American Thoracic Society clinical practice guideline. And as you already said, the clinical practice guideline differentiate between different recommendations. For example, it differentiates between strong and conditional recommendation. And for clinicians, strong recommendation implies that it is reasonable to recommend it strongly to patients and caregivers. Whereas a conditional recommendation means slow down, think about it and discuss it with the patient.

Richard ([03:52](https://www.rev.com/transcript-editor/Edit?token=uPzjwHIYE4g9BXba6oDFujZBBFyolMfD8Cv8usMVyotkHeeLj5gA9YsoPjejwH1LPJtHcvfolbvzQm0wOwGBSYYgpho&loadFrom=DocumentDeeplink&ts=272.45)):

I think that's really important. I also think that's very interesting because we all have to remember that guidelines are not protocols, but by giving us a statements of strength that helps us make the better decisions for our patients. But also as you've said in the conditional recommendations, it should make us think, and I love it when guidelines make us think and actually think about the individual patient in front of us.

Michael ([04:15](https://www.rev.com/transcript-editor/Edit?token=Xb-TqRuWJ2Uxja2QUOlv4INTmeCbUNmi7A5j_ikBntFFxIMU-ONZw64JHip-RcyAbqFbwnkvAi4Ufq8Cuz3lEqQHXmM&loadFrom=DocumentDeeplink&ts=294.29)):

I absolutely agree. And as I said before, we have gained a lot of evidence regarding individualized treatment options in COPD in line with a better understanding of different COPD phenotypes. To make another example, we have treatment options like long-term oxygen therapy or non-invasive ventilation, which are also reducing morbidity and mortality in a well selected subgroup of COPD patients. And therefore we have to make individualized decisions when thinking about treating COPD.

Richard ([04:46](https://www.rev.com/transcript-editor/Edit?token=ODa9fmRHLZQu6C4rcqDtXXhKy1_TqX71b6QJT8e3wmI5RtzgKgWqCgUczefkWvPSPbzu58YJglpM0XhWyLLzC8YgOfU&loadFrom=DocumentDeeplink&ts=326.73)):

And not all these treatments are for everybody. Okay. So let's unpack some of the detail from this guideline. Again, I particularly liked it because they asked six real life important questions. One of the questions was, what we do, is dual bronchodilator therapy better than mono bronchodilator therapy in COPD. What did you recommend?

Michael ([05:07](https://www.rev.com/transcript-editor/Edit?token=84bTeKfHRdZLKMgssHAbdZGQesmno6DtP9hug9VRWFFT5Jm2P90pAqcME6XtehC_hFHY3z6xrq7hrbTOEPxnpOydI9s&loadFrom=DocumentDeeplink&ts=350.23)):

I think it's relatively clear regarding the literature that two bronchodilators compared to one are more effective in improving symptoms, mainly dyspnoea as well as exercise capacity, quality of life and rescue medication, for example. And the ATS guideline gives a strong recommendation for the use of LABA/LAMA combination therapy over LABA or LAMA monotherapy in patients with COPD and dyspnoea or exercise intolerance. And this is the only strong recommendation in this guideline, reflecting the very good scientific evidence. There has been a statistically significant decrease in exacerbations and hospital admissions among patients receiving dual therapy, as opposed to monotherapy, which was found by the expert panel in this ATS guideline. And in addition, a statistically significant improvement in dyspnoea and quality of life with dual therapy was found as well.

Richard ([06:04](https://www.rev.com/transcript-editor/Edit?token=msBEcHRyqaut2J-yNVlXwbykPE8-Jai7NfgJqHfoQE3ecztLEcX_2hMwqd7vv4IxA7mEi7QVcDSDHzOccj9Jfd8QOsc&loadFrom=DocumentDeeplink&ts=407.16)):

Another aspect that you considered in this guideline, as well as efficacy was safety. What did the guideline conclude on safety with regards to dual therapy versus monotherapy?

Michael ([06:15](https://www.rev.com/transcript-editor/Edit?token=bHLCYR9Z78qgV_JGCI9K_QwpGIVyMLcOoFn7Rnp0KM50KBHmyNsOFsLieMeOV-wMBYJMkxMFj7VcuUVUJUHdUqmGfjY&loadFrom=DocumentDeeplink&ts=418.56)):

The studies which influence this recommendation revealed no significant difference in risk of treatment related adverse events with dual therapy versus monotherapy.

Richard ([06:28](https://www.rev.com/transcript-editor/Edit?token=D2U7AygqBKOw1M_Ac8dn7XAXmJncjbJizcdaENrDvPrBewkiEcH_fjV-Zl4mLkIL6SoFsfoz_4TXGf8Ke87I2lFKjP4&loadFrom=DocumentDeeplink&ts=430.09)):

So that's reassuring for us as well. Another important question that we all ask ourselves is when should we use triple therapy, so adding inhaled steroids to dual bronchodilators. We made a strong recommendation now for dual bronchodilators. So when should we add triple therapy or inhaled corticosteroids to this dual bronchodilator therapy?

Michael ([06:48](https://www.rev.com/transcript-editor/Edit?token=ylNM4O_BVIGMr0JR-hFyiH940DLECbIKRBF46HIOJexqWEExf6oR36O4OQC06JTMCGpxlhCshKX53uzaJttJ0zh-VNE&loadFrom=DocumentDeeplink&ts=450.91)):

Well, three questions or three answers are addressed in this guideline regarding inhaled corticosteroid. Number three deals with ICS withdrawal. I think we will talk about this later. And number two, and number four of the recommendation are in fact talking about when to use an ICS in addition to bronchodilators.

Michael ([07:12](https://www.rev.com/transcript-editor/Edit?token=pI8tsKOUnnAYNepBeGzAyf4zKIxn7sIo-zAAzAVJJ0xb2eCBNVjSfAXzLXJnoHYyKHZ1L3D54bKRhhcU4621-wMXQVU&loadFrom=DocumentDeeplink&ts=475.03)):

So the guideline gives a conditional recommendation for the use of triple therapy with inhaled corticosteroids over dual therapy with LABA/LAMA in patients with COPD and dyspnoea or exercise intolerance who have experienced one or more exacerbations in the past year.

Michael ([07:31](https://www.rev.com/transcript-editor/Edit?token=f0e60EiKwkphhdN8piMZlE5kM72dtPZDe7J8emz5seFkFuSVy5n19VhpXD7G7sFxoI-zCk6CdfvIV099mH6UusB4_N0&loadFrom=DocumentDeeplink&ts=493.74)):

And in addition, no recommendation was given for or against ICS as an additive therapy to long acting bronchodilators in patients with COPD and blood eosinophilia, except for those patients again, with a history of one or more exacerbations in the past year. And this can be translated into, it cannot be recommended to use an ICS on the basis of blood eosinophilia alone. Taking together the two recommendations regarding the use of an ICS, triple therapy should be mainly prescribed in patients with the combination of an exacerbation history and elevated eosinophil count in the blood, which was defined in this ATS guideline as more than 2% of blood eosinophils or higher than 150 cells.

Richard ([08:19](https://www.rev.com/transcript-editor/Edit?token=jlyn789kmrGqc7Bis8Jv8-_e-VA2VsP5ZNVLsV49l4__vszTuHwa8-0l4lqZ-VoX3SiBp671McvPNUfeADdo2ItxMVM&loadFrom=DocumentDeeplink&ts=541.18)):

In this aspect of the guideline, looking at inhaled steroids when added to other therapies, were there any safety concerns raised or how was the safety issue dealt with?

Michael ([08:27](https://www.rev.com/transcript-editor/Edit?token=mhT5Z97ZVOebpBxzg9Yk3tzSld8V73dutCqAyQUoHUglOuEHjfbWnZWAVRcUsiBltUv46pGe7cDXg7hOaYBfNq3pjhQ&loadFrom=DocumentDeeplink&ts=549.89)):

That's a good question. And there is a significantly increased risk of pneumonia with triple therapy as compared with dual therapy. And we have to take this into account. In addition, we also know from several analysis that long-term use of ICS can be associated, for example, with diseases like osteoporosis and infections. It has recently been shown for example, that ICS treatment is associated with increased risk of infection with non-tuberculosis mycobacterium. On the other hand, there is new data coming out of Germany from the DACCORD registry being presented at this year's ERS. And it has been shown that ICS use is on a long-term basis associated with an increased risk of osteoporosis. This is not surprising you can say, but what is new and has been proven for the first time, as far as I remember is the fact that it has been shown that this is irrespective of the use of systemic steroids.

Richard ([09:25](https://www.rev.com/transcript-editor/Edit?token=IUnJm49TwPKF69CW8UZpPYZeeiiO7ARUCa9LO_GZEzALyzckIHPo7xtov4wm20RDlI6ZIrVvEZO5Pgw4ti11UABp0jE&loadFrom=DocumentDeeplink&ts=607.71)):

So what you're really saying is coming back because this is a conditional recommendation, not a strong one that we need to assess the risk benefits for our individual patients based upon the exacerbation history, exacerbation risk, risk of side effects from medication long-term and also the blood eosinophils?

Michael ([09:43](https://www.rev.com/transcript-editor/Edit?token=7tBsnUTyfxGRBUYuJZ9mB-6pgGQmrj-4F2XGWuLUDPq0QfaZwpSAEwpqnuWSpMgdf0-J8lKA_veaCurT3bg4694Hiho&loadFrom=DocumentDeeplink&ts=625.6)):

Absolutely right. We are, again, coming back to the point that we have to make individualized decisions and we have to talk to our patient and explain to the patient and the GP, for example, what kind of treatment strategy we use in this specific COPD patient.

Richard ([10:00](https://www.rev.com/transcript-editor/Edit?token=yODr2HBeV3dXzhHZQmNBa4nBsLccCXrI_a3ZbDejxhmxQi-fSdelY0TlMlf6Tz05QQek4I02H_ba2I6kJkvEu0x3k_Y&loadFrom=DocumentDeeplink&ts=643.01)):

So the other question that was raised about inhaled corticosteroids was about when inhaled corticosteroids can actually be withdrawn. And we obviously have some studies such as the SUNSET study and the WISDOM study, which have previously looked at that critically. What did the ATS guidelines recommend with regards to steroid withdrawal?

Michael ([10:19](https://www.rev.com/transcript-editor/Edit?token=XExsY0vDa3wQ7idGDLDbMKRZO0aSuw0fJtPaE9AnNwEVrhIjPKmWA7sTXSI77avJlo3AhdJibH59mzhaCvvSwcySn5Y&loadFrom=DocumentDeeplink&ts=661.06)):

The ATS guideline recommends that there is a conditional recommendation for ICS withdrawal for patients with COPD receiving triple therapy if the patient has had no exacerbation in the past year. And this recommendation is based on two available, randomized control trials, which you have already mentioned, showing withdrawal of ICS was not associated with a statistically significant difference in risk of pneumonia, all-cause mortality or risk of COPD exacerbation. And one of the two studies you have mentioned was the SUNSET trial. And maybe I can comment on this trial a bit more because I like this study very much. The SUNSET study randomized patients with moderate or severe COPD using triple therapy and no more than one exacerbation in the past year. And they investigated if discontinuation of the ICS was feasible and not associated with an increase in exacerbations compared to a group which stayed on triple therapy.

Michael ([11:19](https://www.rev.com/transcript-editor/Edit?token=QOJHXmqQFuZ84su28bdKo2kgxjwSmDMQdnrxLh4XpypRX0uJHBig7QavVwW5zXw0Tzm9sSvlFaykOT8hOFoxwMraLF8&loadFrom=DocumentDeeplink&ts=721.7)):

And this design reflects my way of stopping ICS in COPD patients like I did before the SUNSET study came out. If I had a COPD patient on triple therapy with moderate or severe COPD, and no exacerbation history, I discussed with my patient the possibility to stop the ICS treatment. And the SUNSET study has shown that the discontinuation of the ICS was not associated with an increase of exacerbations in this specific COPD cohort. However, if you look into the subgroup analysis of this study, you can see that there is one specific group where exacerbation rate was increased when the ICS was stopped. And these were the ones with eosinophil counts in the blood higher than 300 cells.

We are coming away from having a strict protocol, how to treat COPD patients towards a more, I would say personalized medicine with regard to phenotypes, but also with regard to working diagnosis, to see if the treatment strategy is effective, to change it and maybe to change the protocol once again.

Richard ([12:25](https://www.rev.com/transcript-editor/Edit?token=fmmupwQ2wJibDGsOmJ38Pjg1aFevxwHxuwotJgqZRsofB9xr0K16GCbi9BlMfty-sCzbY5VhibZ8Hr8bwzSUmRG5nsQ&loadFrom=DocumentDeeplink&ts=878.24)):

I think the other thing that's exciting is an opportunity of when we do change therapy for an individual patient, we get the opportunity to look at again, inhaler technique. The actual inhaler we're giving, maybe also the drugs we're giving, which may have different outcomes for different patients. And then also, as you already mentioned, other things, not forgetting reassessing the role of pulmonary rehabilitation, oxygen therapy and other things which may make a difference to that patient other than just inhaled therapies.

Michael ([12:53](https://www.rev.com/transcript-editor/Edit?token=TX_Qca32dC3UKSUzvwF2RMumO_SvPxj9LuvrQUCO9o4CYPxw-NSUEOdH7mZUvH426GC9oMQWDNjV53OkFRwGePXt6jQ&loadFrom=DocumentDeeplink&ts=905.47)):

I absolutely agree. By adjusting the treatment, we might see our patient a bit more often. And by seeing the patient more often, you might think about other treatment options you discuss with the patient and the GP about different treatment strategies. And this at the end of the day might improve the overall treatment.

Richard ([13:14](https://www.rev.com/transcript-editor/Edit?token=h348op0r2YvVu16tvJw8irJ0qyrT_57twuiZa5a26r36k23ktWyM8bXE0yUTVnpnBvWvPhAnqJi8zEMpC5M2zjWwYlk&loadFrom=DocumentDeeplink&ts=930.98)):

Now there were two other questions which were raised in this guideline, one dealing with oral steroids and one dealing with opiate therapy, quite different and also quite controversial. So let's deal with the oral steroid question first. What did the guidelines say about the use of oral steroids in COPD?

Michael ([13:29](https://www.rev.com/transcript-editor/Edit?token=aBK00kzMFqf686tUcotMgVaQu6F4h77EwIcyhoCeUfBruRDqpg_lCe0jBrB4hTeZ-ZNx_XLayHyPSBP4g61Ngk2twnU&loadFrom=DocumentDeeplink&ts=945.61)):

The ATS guideline made a conditional recommendation against the use of maintenance oral corticosteroids in patients with COPD and a history of severe and frequent exacerbations. And this was due to the fact that there was an increased risk of adverse events with oral steroid use versus no oral steroid use without a benefit of oral steroids regarding mortality, exacerbation frequency and dyspnoea. However, we have to be aware that this recommendation was based on randomized control trials that had a small sample size, small numbers of events and short durations.

Richard ([14:07](https://www.rev.com/transcript-editor/Edit?token=M2VfhmVkDWFKGFUcU5MD2gysaL2xklGTW14Hbjd30fjtOCjJadrXxLDWi84ASkpsJ3VvlnTEYA9tGPt6K2C-sUB90m4&loadFrom=DocumentDeeplink&ts=985.02)):

But we all know, and you're absolutely correct. Long-term oral steroid therapies are extremely deleterious to our older population, particularly from the osteoporosis, diabetes and skin effects of oral steroids. So I agree with this. I think we should be very, very cautious how we use oral steroids because of those effects.

Michael ([14:24](https://www.rev.com/transcript-editor/Edit?token=xgkgnOHYZsC6iRJG9LaZpxHpF1emNPE1u23S6YRWtjMgwdXjuI20id53sh3ZSZTGbeLMlC33M15nXl2GhDgBgPZOgJg&loadFrom=DocumentDeeplink&ts=1003.05)):

I absolutely agree. Yes.

Richard ([14:27](https://www.rev.com/transcript-editor/Edit?token=d_McHYCuDMLKUYprRhX-cMJdm3RgEeI7FuUzU2stQrke9PtOdUJAAW6uRlevi1JhmR4NytwAiHBV_ziKGJSVaVV0XIA&loadFrom=DocumentDeeplink&ts=1004.76)):

So the other aspect, I was actually very pleased that they looked at was the role of opiate therapy to relieve breathlessness in advanced COPD. That was quite controversial I suspect given the opiate crisis that we have in the world to a degree, but what did the guidelines say?

Michael ([14:43](https://www.rev.com/transcript-editor/Edit?token=awIRdNZ2DrF30Jx-OxWlXWq1TG9h2UWIXw6cDdBbRP_2RFI1sWdKbolp8bMRCPZAKxlA_IVvJXZyTOAZk5Ly2u2bud8&loadFrom=DocumentDeeplink&ts=1021.01)):

Again, there is a conditional recommendation for opioid based therapy in patients with COPD who experienced advanced refractory dyspnoea despite otherwise optimal therapy. And this was due to the fact that there was a statistically and clinically meaningful improvement in dyspnoea with opioid treatment. Of course, you have to be aware about the risk of uncertain harms like exacerbations, hospitalizations, falls or overdoses, especially hypercapnia should be taken into account. We are talking about the end stage COPD patient, the very severe COPD patient perceiving dyspnoea despite an optimal treatment. And there you have to talk about comorbidities, psychological disorders. You have to talk or think about respiratory insufficiencies. So it's a lot of different aspects you have to take into account, discuss with your patient and think about before starting opioid treatment in such a patient.

Richard ([15:47](https://www.rev.com/transcript-editor/Edit?token=hXI6ZpLBXaAqGugbl8hUcCIUM3fDlZNYA5FLeHEq1EC8H_nUnc6qDUtNwGDVZGDxo7QWUnuslJgbYccuoAhklHXtr8g&loadFrom=DocumentDeeplink&ts=1124.29)):

So I certainly found this guideline very approachable, very easy to read. And also I think some of the recommendations certainly can be applied to ordinary clinical practice. They're easy to understand. So before we move on to the next section of the podcast, perhaps you could summarize for us the brief findings of this ATS clinical guideline.

Michael ([16:08](https://www.rev.com/transcript-editor/Edit?token=Uc1VopGffHQwmf3SsT85tgpV6sEZ2bhDYEbMo_yDU1aMygV08T4R3yCw6ZPUTvHSt-6oEefqRdYCI9e7E4ThrV0GtWI&loadFrom=DocumentDeeplink&ts=1145.99)):

Yes, I would love to. I think the ATS guideline is very practical and it tells us how to choose the best pharmacologic treatment for our COPD patients. There is a strong recommendation due to the best available evidence for the use of two bronchodilators instead of one in patients with COPD and dyspnoea or exercise intolerance. With regard to the addition of inhaled corticosteroids, there is a conditional recommendation for patients with a history of exacerbation and elevated blood eosinophils. What I like very much also it is again only conditional is the recommendation against the use of maintenance oral corticosteroids in patients with COPD and a history of severe and frequent exacerbations. Finally, we should think about the use of opioid based therapy in patients with COPD, who experience advanced refractory dyspnoea, despite otherwise optimal therapy. I think that these simple recommendations guide us very well and pragmatics through the different currently available treatment options for COPD.

Richard ([17:18](https://www.rev.com/transcript-editor/Edit?token=tyorKRuUG390FClzc6rTvGZlvfGNIuc96iSudiO7pKnbFsOqp6QOz_yGQhj4T9GhY04HRYb2ZsjF_mDom7SQD83nbNQ&loadFrom=DocumentDeeplink&ts=1214.23)):

Just before I now come to the second section of the podcast, which is the review of the publication on inhalers, I have to thank Michael very much for your review and updating us with regards to these new ATS clinical guidelines. Thank you so much. I've really enjoyed spending time chatting with you. And I look forward to working with you again soon. Thank you indeed.

Michael ([17:36](https://www.rev.com/transcript-editor/Edit?token=WczoF2iS7cLo5VZ6vu_SulIAJ_eqcqZM88ZVXT-tzGd33DJqPqYeZlzhgwtemNXyFgfCQeyTRPpp-9ZQMmR7RNOsH0M&loadFrom=DocumentDeeplink&ts=1233.33)):

Thank you, Richard.

Richard ([17:43](https://www.rev.com/transcript-editor/Edit?token=x58WhlaJIooqeBq4-V_Z3E2i6iExtoUiFg44zFZ2kf3NDGMTH5fdsxvAP2uCQ_fTMMMckAd629kaqgYMeJly8ZIhOE4&loadFrom=DocumentDeeplink&ts=1240.24)):

Now we move on to the podcast section, which looks at new and exciting papers published in the world of COPD research. A paper which has grasped my attention in the last couple of weeks has been one published by Tervonen et al. in the current issue of Thorax, that’s Thorax, volume 75, issue 9, page 735 to 743. It's entitled, “Maintenance inhaler therapy preferences of patients with asthma or COPD, a discrete choice experiment”. So this grasped my interest because it's about patients and it's about what patients want and what these researchers did was a thing called the discrete choice experiment, which is a methodology which looks at patient choices and also assigns weights to them.

Richard ([18:23](https://www.rev.com/transcript-editor/Edit?token=uSwu3cB15EdAOYg4TnMRLbskXLz5AzqZOEV6HSZvRzcttHVBFwuW1QVdGao6E8rWCkPVzwHuvjg2G9drI2reIeFLh6E&loadFrom=DocumentDeeplink&ts=1280.76)):

So you can actually compare choices and compare trade offs, such that a patient would trade off, perhaps a easier to hold inhaler versus one that I have to take twice a day. So this will help us actually design and select inhalers for our patients. This group looked at over a thousand COPD patients and 800 asthmatics and looked at the things that they wanted from their inhalers and from their treatments.

Richard ([18:4](https://www.rev.com/transcript-editor/Edit?token=dg_tdH6UVHfvxQrZl1tHD9qOZKgDVx8f8H8zlbd3ASBEWSuBKvh4eiWt86A3AMVMCtH6IJpIfqOhK4NRDYFSFimUYlU&loadFrom=DocumentDeeplink&ts=1304.18)7):

So what did they find? They found that both for asthma and COPD, the patients were very similar with their choices. The speed of onset of therapy was the most prized attribute from a treatment, but also they wanted to decrease exacerbation rate. Interestingly, if you then look at the trade offs, patients were prepared to accept a slower onset of therapy if side effects were reduced, particularly side effects of inhaled corticosteroids, and that would be pneumonia and osteopenia was actually mentioned by the patients.

Richard ([19:18](https://www.rev.com/transcript-editor/Edit?token=T2WJvbsBnmsBaB42ducmDySl3CTimICGFJuECAlTgTH5jrekPwpVfLqoJPUp6u1c4zxh3vQhASMd0mYTiJkxT8IJvPY&loadFrom=DocumentDeeplink&ts=1335.53)):

Convenience factors, such as MDI versus DPI or multi dosing versus single dosing, once daily versus twice daily was mentioned and was significant for patients, but not as much as efficacy of the medication and delivery of the drug. If we actually get this right, and patients want to use their drugs and the drugs work for them effectively, then they'll obviously use the drugs more and they'll adhere better to therapy and get better outcomes.

Richard ([19:42](https://www.rev.com/transcript-editor/Edit?token=p9VUwi4Gd1o2-QsHC4pDJceQGuhHt2250vsFlKc1fojg0T_lt1A2jpEG2nLk7GakfnIgtI1bPRec74RLgie0MwKyssc&loadFrom=DocumentDeeplink&ts=1373.41)):

So this paper is interesting and well-worth a quick read. So now in the final part of this podcast today, we're going to talk about the hot topic for our COPD patients and for us. We're going to talk now about air pollution. The exposome, this is an extremely important topic for the whole world, but particularly for our COPD patients, because air pollution has a particular impact on their lung health and risk of exacerbations.

Richard ([20:10](https://www.rev.com/transcript-editor/Edit?token=0_iTPSewzwXbtQTEi8V-Eonqqg8O_PURi6XxUNQ4GvByqj9XxGMO7Zy1UFaPdSnDDpa-C9991r9AnFxssw8R4Sc6O84&loadFrom=DocumentDeeplink&ts=1401.86)):

Did you know that it was World Clean Air Day on September the 7th? September the 7th was chosen because it's estimated that 7 million premature deaths occur every year globally because of poor air quality. There has been a huge investment in this now, particularly in European Union by the Horizon 2020 program

Richard ([20:28](https://www.rev.com/transcript-editor/Edit?token=3IBA2zzeW0rKLa1CEmtSCW43aDwXA5MY2N14_Grig195DJS4Vsr6cIFPN8Fs26bM3RZobL8985caPeg3vCy0vD7fq7M&loadFrom=DocumentDeeplink&ts=1433.2)):

There has been an impact of COVID on clean air. It's felt that actually, unfortunately, the COVID crisis and lockdown won't affect climate change very much, but transiently we certainly all saw change in our air quality, 25% reduction in emissions in China's carbon. There was a 50% reduction in their emissions of nitrogen oxide. Air pollution in India was significantly reduced. Water quality in Venice improved. And there was a massive increase in fish biomass and in the United Kingdom, 85% more people started using their bicycles regularly, which is absolutely fantastic. And this has led to major programs or investments in bike paths in Paris, London, and throughout Europe.

Richard ([21:10](https://www.rev.com/transcript-editor/Edit?token=R8TQgH2cZ3ICJuGhhEjr80-Hht4gR7wqKueAFzzl8UfUbUAdfYPWFkuTc6jwZYoUCtIawGOZ0RFEtS_hCsrSs37T7dY&loadFrom=DocumentDeeplink&ts=1474.63)):

So air quality is important. It's trending on #COPD, #air pollution, and it is important thing for the world for us to take forward, to improve our quality of life, improve our health and reduce unnecessary deaths.

Richard ([21:25](https://www.rev.com/transcript-editor/Edit?token=7gugf1NdBxPvpXYpPtIg14vfgGwA_6zxaxp3Iy_rXcwHaLIa-sulPEhQ75Ynj_mSlmLsqq8jo_cYakWZ3HX5w6oscqo&loadFrom=DocumentDeeplink&ts=1489.07)):

Thank you for joining me today on this podcast. I particularly enjoy doing it and I want to thank my guest professor Michael Dreher. Again, thank you for helping us unpack the ATS new guidance on treatments for COPD, and I'm looking forward to the next podcast and I hope you can join us. Please look out for it. And please, if you've enjoyed this podcast, subscribe to our series.