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Doing Science: a Juniors' 'How to...' Series

Starting a scientific career means learning a wide range of new skills. Often you do them as best you can and try to learn in a trial and error basis how to do better next time. This "Doing Science" section is a joint initiative of Breathe and the ERS Junior Members' Committee (JMC) and will address common tasks that scientists and clinicians are faced with early in their careers. The topics we will cover (*e.g.* poster presentation, chairing sessions, reviewing papers, *etc.*) are not exclusive to Junior Members but are often relevant to members of all levels of academic experience; so, we hope that there may be something here for everyone.

Doing Science: Preparing a poster

So, your abstract was accepted for a poster session? Great! Or had you hoped for an oral presentation? Poster sessions offer some unique opportunities to present your work and should not be regarded as a "second-rate format" during meetings and congresses. Poster discussions have sparked many research ideas, collaborations and job opportunities that would have never occurred in an oral presentation setting.

Having a good poster is the key to success [1]. We have therefore compiled some tips that can help you present your work more effectively.

The unique features of a poster

In contrast to scientific papers and oral presentations, the poster offers many more opportunities for interaction and feedback [2]. A poster medium is not just a formal display of your research but it provides a focus for people to meet you so you can explain and discuss your work.

Consider the purpose of your poster carefully. The skilled presenter will use the poster to highlight key points and even rhetorical questions in order to engage the

viewer in discussion. The poster can also be used to display work in progress, in order to get input from the audience and (why not?) new collaborations. Do not be embarrassed to approach fellow researchers; you will be amazed by how everyone is trying to show their work and to improve their methods (that is science!). Help other researchers and let other researchers help you.

Another unique feature of the poster is that it is the most personal form of presentation. One way to make people remember your poster is by making sure they remember you. Put your contact details (and even your photo) on the poster: it helps viewers and chairpersons pick you out in the crowd during busy sessions. Have copies of the poster readily available to hand out. Your poster is a nice greeting card, and this will make further contacts easier.

Poster content and layout

Posters, like all presentations are a balance between scientific detail and message [3]. At the time you submit the abstract, try to choose a title that is brief and readily understandable; this is what will draw attention in the congress programme. The average viewer has limited



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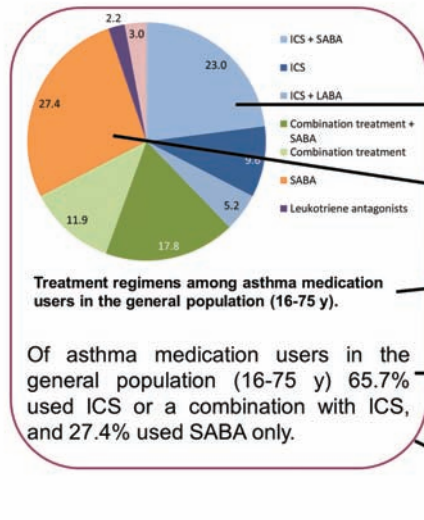


Figure illustrates complex data

Bright colours

Clear figure legend

Only key findings are summarised

Framed, so figures are not confused

Of asthma medication users in the general population (16-75 y) 65.7% used ICS or a combination with ICS, and 27.4% used SABA only.

Figure 1. Key elements of a poster figure. This detail from one poster at the ERS Annual Congress 2013 illustrates key elements to consider when creating poster figures. Courtesy of Linda Ekerljung, Krefling Research Centre, Sweden.

Figure 2. De-cluttering your poster. Compared to one of the authors' early posters (left), the poster on the right has fewer but clearer figures, less text throughout, a few clear key conclusions and a much more pleasing overall layout. Courtesy of Linda Ekerljung, Krefling Research Centre, Sweden.

time and you will want to catch their attention and show your findings clearly. Remember, interpretation is king and data are its humble servant. Focus on two or three key messages early and create the poster around these. Can you summarise your results in one or two figures? This makes your work more understandable and much easier to explain. Avoid busy tables; instead, highlight the main results (high-contrast colours, boldface, underlining) and give a footnote about all the other variables for interested viewers (optimally with references to published work). Do not use extensive table legends; if your figure or table is too demanding, then state the interpretation in an accompanying bullet list. Guide the viewer through the poster using lines and arrows as needed.

The poster should be viewable from 2-3 meters away, meaning font size needs to be big. We recommend 36 points for the text body, and even higher for the main conclusions. Use sans-serifs typefaces, such as Arial or Calibri to improve readability. Stick to a palette of three or four colours, and make sure you have a nice contrast. Shiny photographic paper is susceptible to reflections, so choose matt or regular paper and leave photographic paper for photographs. Bring the poster rolled up in a showerproof cylindrical case, preferably as cabin baggage. You can also snail-mail the poster to the event location or your hotel, or use printing facilities available on site.

Presenting the poster: your time to shine!

A poster presentation means you will have to shine fast and bright. When the average viewer approaches you, you have 10-30 seconds to make a positive impression and state your findings. Polite questions such as "Could you briefly state your key findings?" or "Could you explain this figure to me?" might mean that the poster is too cluttered for the audience to figure this out on their own.

On a typical poster session, poster presenters are given 2-3 minutes to explain their work to a group of listeners and the poster chairs. During this time, try to provide your audience with the essence of your work rather than many details. Always bear in mind that no-one knows your research project better than you. Surprisingly, many presenters are not halfway through explaining their poster

Asthma medication use in the general population of West Sweden

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BACKGROUND

There is an on-going debate whether the prevalence of asthma is increasing, and results of epidemiological studies are conflicting. Use of asthma medication can be used for evaluation of questionnaire based reports of physician-diagnosed asthma. Many studies focus on the use of asthma medication in clinical cohorts of asthmatics, but very few study the use of asthma medication in the general population.

AIM

The aim of the study was to identify patterns of asthma medication use and determinants of asthma in a general adult population in West Sweden.

METHOD

- From a randomly selected population, aged 16-75 years, who participated in a postal survey on respiratory symptoms, a random sample of 2000 was selected for detailed clinical examinations, including questions on use of asthma medication. 1172 participated.
- In addition all remaining subjects (n=1536) reporting asthma were invited, and all together 3002 subject participated.
- Prevalence of asthma medication use was determined in the random sample and use of asthma medication and its determinants were studied among all having asthma.
- An 18-year comparison of the change in prevalence of use of asthma medication in the ages 21-40 was made with the EC2RS performed in Gothenburg in 1992.

RESULTS

Asthma medication was used by 11% of the population. 8% used short-acting beta-2 agonists (SABA). 63% of SABA users also used inhaled corticosteroids (ICS). 4% used ICS and an additional 4% used a combination treatment with ICS and LABA.

Among asthma users aged 21-40 years:

- Asthma medication was used by 71% of subjects with asthma, 92% of subjects who had visited an asthma specialist and 68% of subjects reporting COPD.
- Increase use of inhaled corticosteroids.
- Decreased use of SABA. (Figure 3)

CONCLUSIONS

- There has been a 55% increase in asthma medication use from 1992-2010
- A shift in patterns of asthma medication use has occurred with increase use of inhaled corticosteroids and decreased use of SABA among asthmatics and introduction of LABA
- A majority of asthma medication users use ICS

Asthma medication use in the general population of West Sweden

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BACKGROUND

There is an on-going debate whether the prevalence of asthma is increasing, and results of epidemiological studies are conflicting. Use of asthma medication can be used for evaluating questionnaire based reports of physician-diagnosed asthma. However, data from the general population is lacking, since medication use is commonly studied in clinical populations of asthmatics.

AIM

The aim of the study was to identify patterns of asthma medication use and determinants of asthma in a general adult population in West Sweden.

METHOD

- 30 000 randomly selected adults (16-75 years) were invited to a questionnaire survey of respiratory health. From the participants, a random sample of 2000 was invited to detailed clinical examinations, including structured questions on use of asthma medication, and 1172 participated.
- In addition all remaining subjects reporting asthma (n=1536) were invited. 3002 participated.
- Prevalence of asthma medication use was determined in the random sample.
- To study the change over 18 years in the prevalence of asthma medication use, data was compared with the EC2RS performed in Gothenburg in 1992 using asthmatic subjects aged 21-40 years. Being in Gothenburg.
- Inhaled corticosteroids (ICS) - inhaled corticosteroids, LABA/LABA - longacting acting beta-2 agonists.

RESULTS

In the general population (16-75 years) 11% used any asthma medication. 8% used SABA were used by 6% and 63% of SABA users also used ICS. Asthma medication was used by 71% of subjects with asthma, 92% of subjects who had visited an asthma specialist and 68% of subjects reporting COPD.

In an adjusted logistic regression model, the same pattern appear for all investigated medication variables with allergic rhinitis, chronic rhinitis and having a BMI > 20 being stable risk factor. For use of inhaled corticosteroids also increasing age was a risk factor.

CONCLUSIONS

- There has been a 55% increase in asthma medication use from 1992-2010
- A shift in patterns of asthma medication use has occurred with increase use of ICS and decreased use of SABA among asthmatics
- 11% of the general population use asthma medication
- A majority of asthma medication users use new use ICS

after the 2–3 minutes; this is a sure way of getting no questions or discussion on the hard work they display. Practise your short speech, be prepared and then enjoy the ensuing conversation! You can even prepare answers in advance to the most likely questions from the audience. Remember to smile and be confident.

And in the end...

Enjoy your time presenting your poster and, above all, make the most of the opportunity to connect and interact with fellow researchers from all around the world. Try to spread your message, receive constructive comments and help your colleagues do the exact same thing. The important thing is to Make Science!

References

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