Going Public
4. Talks to an adult audience

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This guide has been prepared from the personal experience of Liz Sockett (SGM Education Officer) to help you to plan a successful public presentation to adult groups. It is not meant to be exhaustive, and is based on a straight forward lecture style presentation.

The event and its venue

Typical venues include a meeting of the WI or Townswomen's Guild, Young Farmers, Health Interest Group, Philosophical Society or a local Science Café. Speakers are also sought by local interest groups such as patient support groups or local organic food co-ops. You may decide to organise an event for National Science Week (formerly setWeek) in a community hall, public library or in a university lecture theatre. You will probably need to set up the room yourself, or find out what facilities will be available for your talk, and what your audience will be like. A very small but accurate abstract, containing some questions (of public interest) that you will address will be useful to the organisers when publicising your talk. If you organise your own publicity then the event should have a punchy title and summary outlining why this is an unmissable opportunity.

Preparation of visual aids

◊ Many venues (such as community halls) have no basic equipment such as a slide-projector or OHP or even the means to darken the room. In this situation the options are as follows:

- Take your own equipment
- Use enlarged colour photocopied diagrams on card or photos to hold up and show

If you need tables, chairs and electrical points it is important to let people know in advance.

◊ Avoid the use of your research data slides, they are always too complex for a lay audience. Simplify any text and give graphs a simple title and bold numbers (if the numbers are important).

◊ A good way to gain audience attention is to use simple slides with newspaper headlines, public statistics or quotes from well known figures (explain who they are if you're quoting allegedly well known scientists!).

◊ Slides that sum up your points are very useful.

◊ Try to include some beautiful images, we often forget how interesting micrographs are.

◊ Slides that show surprising facts or data will be of great interest. Audiences like myths to be dispelled or to be surprised, but try to avoid taking a patronising tone. A good example is "Infectious disease killed more in World War 1 than the hostilities".

◊ If you prepare a simplified Powerpoint talk it will serve you again and again and is easily modified. Nothing gives away a lack of PUS awareness more than a "pick and mix" assembly of various research slides without any simple intervening take-home messages.

Presentation structure

◊ Aim for quite a short talk 30 – 40 minutes is fine. An hour may be too long unless you carry out a simple demonstration (e.g. simple DNA extraction) or include some type of audience participation activity during the presentation.

◊ Introduce yourself and say where you are from. Your audience want to know your credentials in a form they can understand. If you have a local connection, explain it and they will warm to you.

◊ Do check the acoustics with a simple "raise your hand if you can hear me at the back" before you start. Many of your audience may be elderly and hard of hearing.

◊ If you take a 5 -10 minute tea or wine break immediately after the talk, so that people have a glass or cup in their hand at the question session, your audience will be more relaxed and things could really go with a swing! Remember to tell them you'll be reconvening in 10 minutes for questions or they'll all go home.

Presentation style

◊ A memorable and accessible opening statement will get you off to a strong start. If it's funny or fascinating, all the better.

◊ Try for most of the time to be a member of the public WITH the audience. As you explain the facts say "as we can see from this graph", not "as you can see".

◊ At a public talk, you may need to go more slowly that when lecturing students or research colleagues.

◊ Avoid at all costs the use of "scientists say" and "you think…" If someone famous did discover it then fine, otherwise try to remember you're a member of the public too. Try to weave in everyday experience "When we do the weekly shopping we may wonder should we buy organic vegetables or are they teeming with bacteria"

◊ Link scientific data to the size of the room, your audience or the local population (e.g. "in an audience of some 200 as you are, we might expect 20 of you to carry this bacterium harmlessly in your throat". "If an xxx particle were the size of a marble then the cell it binds to would be the size of this auditorium".

◊ Avoid using any acronyms e.g. FRS, BBSRC, they are not relevant in this context.

◊ Avoid obscure terminology or technical uses of words e.g. trait (say gene), isolates (say bacteria)

◊ If you can not avoid using specialist terms, it is essential to define them with a simple explanation. At a recent science festival the following terms were all used ill-advisedly in public lectures, to the bafflement of the audience: selection density, substrate profiles, anthropogenic, zoonoses, commensals.

◊ Be very careful in giving gruesome facts. We do this to delight undergraduates, but remember that someone in the audience may have a close relative who died horribly from the disease you are describing. They will have come to your talk exactly for this reason, so do not make light of the symptoms or the outcomes. There are other places to inject comedy, not here.

◊ As in all lectures, sum up simply at the end. Tell the audience what you have shown them and what there is still to find out.

Question sessions

◊ Make it clear in the programme how long there will be for questions, announce that at the beginning of the question session. If your talk has run woefully over, then penalising the audience by reducing

their question time will not endear you to them. If you have control over the room booking, then at least 30 minutes to an hour "over-spill" time is wise.

◊ Explain to your audience that you'd like to take a question from as many people as possible so please can questions be concise and to the point. This will help you to "close down" any extremist who may wish to hijack your platform for their own ends by making a full length speech themselves.

◊ If you're the only person with a microphone, then repeat all questions before answering them.

◊ When fielding questions you will get many excellent, informed and enthusiastic questioners. You may also start to recognise certain stereotypes : the retired GP; the eco-warrior; the worried lady who has surfed the net and gathered a series of facts which seem to contradict your story; the angry person.

◊ Do not feel that you cannot agree with points made by audience members and respect their freedom to hold an opposite view to yours, even if that view seems obviously flawed. For example, the assertion that tobacco mosaic virus causes AIDS (stated by a questioner, at a public talk in a library) is obviously wrong but can be countered scientifically and not by smiling! However funny or unlikely it may seem to you, to the rest of the audience it just sounds like a new sinister scientific term linked to a well-known killer disease.

◊ It helps to encourage your audience e.g. "That's a very good question". "As the lady earlier put it so splendidly…" "Yes you are right in one way, however in the other area…."

◊ Prepare some questions to ask the audience. You can do this at the outset of your talk to test opinion, or during the questioning to "get them going" or to regain control! Suggested questions include

- "Who currently eats only organic vegetables" (show of hands).
- "I'd like to ask your opinion on a three part question: should genetic modification be allowed on foods and cures for disease like cancer, on cancer cures only, or should it be banned in all cases?"
- Ask for a show of hands on each part then make sure you report back the number of hands you see to the audience. Remember they can't see the numbers!

◊ Don't feel that you have to have the answers to all their questions. Make this overt at the outset if you're nervous about it "My speciality is xxx but as this evening is about xx & yyy which is a huge area, I'll do my best to answer questions on that too". If you do not have an answer say so and why.

◊ When drawing the questioning to a close, point out that you have run out of allocated question time. Invite people to come up to the front to ask any burning questions after the session.

Safety Issues

◊ Avoid taking cultures with you as in a large group of adults you may not be able to make sure they are safe and untouched. If you do take a sealed culture, under no circumstances allow it to be opened and make sure that it returns to your lab for safe disposal.

◊ Any demonstrations should undergo a hazard assessment before the event. Bear in mind that you will not be in a laboratory.

◊ Check the situation regarding public liability insurance, you may not be covered under the existing university policy.

Other handy hints

◊ If you have time, try out your talk on a non-scientist.

◊ In the week before the talk, it is useful to scour the popular press (tabloids too!) for any articles that may be relevant to your topic. Your audience may want to know what you think about those articles.

◊ Thank the audience for contributing to a stimulating evening. They want to feel that they have got something from the event and given something to it.

◊ Leave a lot of "lingering time" at the venue after your talk, and make sure the room is booked for that. People love to drift up individually afterwards and talk to the scientist.

◊ You may wish to assess the evening by a simple questionnaire. Typical questions could include:

- Audience opinions before and after the talk
- What other topics would be of interest
- Whether they go to a lot of these types of event
- What drew them to yours
- General suggestions for improvement

Leave some boxes by the door to collect responses (and some pencils).

◊ Recruit some helpers (students or co-workers) to give out information or talk to individuals at the end. Explain who they are and why they are there at the beginning of the event. Their presence will ensure that you will not be left alone under interrogation at the end of the session!

◊ See if you can take a few "freebies" from your friendly Research Council or Learned Society! People love to have a small postcard of a bug or leaflet to take home with them. Often these organisations produce quite useful material that you can link to your talk. (Do check what it says first though in case it contradicts your message!)

◊ Prepare a very brief "reading list" of web sites and popular journal articles (e.g. *New Scientist*/*Scientific American*) if you have time. Invite people to pick one up if they wish (otherwise they will feel too shy to ask!)

Sources of further information and resources

STEMPRA (Science, Technology, Engineering and Medicine Public Relations Association) have published *Doing it!* - a compendium of practical advice for science communication - on their website. **(www2.ifr.bbsrc.ac.uk/stempra/default.html)**

COPUS (Committee on the Public Understanding of Science) have published several booklets with guidance for those planning a PUS event and also offer several grants. Information is available on the website **(www.royalsoc.ac.uk/copus)**

The British Association have published a guide *How to organise your own event for setWeek* for further details contact Maria Roy on 0171 973 3074, maria.roy@britassoc.org.uk

The BBSRC and MRC offer small grants for PUS activities to their funded scientists and produce a range of materials suitable for use with the general public. **(www.bbsrc.ac.uk, www.mrc.ac.uk)**

The SGM provides small grants to members organising PUS events. **(www.socgenmicrobiol.org.uk)**

The Wellcome Trust offers small grants to scientists planning PUS events to promote biomedical science. **(www.wellcome.ac.uk)**