Pathologist Toolkit for Public Engagement:
Organ Donation

Photo: George Brooks

The Royal College of Pathologists
Pathology: the science behind the cure

Pathologist Toolkit for Public Engagement:
Organ Donation

What is included in this kit?

- A brief for pathologists delivering this NPW session on organ donation and a guide to the materials included in this pack and how to run this session.
- Top tips for running pathology outreach sessions with young people
- 3 x discussion scenarios on the subject of organ donation for 16-19 year old AS and A2 students
- National Curriculum links for AS and A2 level biology
- Introductory power point presentation for use when delivering session

1. Public Engagement Brief for Pathologists:

To prepare for and take part in public engagement events as a member of the Royal College of Pathologists.

1.1 Objectives

- This brief is designed to outline the roles and responsibilities of participating in public engagement events, these are open to discussion due to the evolving nature of public engagement.
- The College is keen to encourage as many members as possible to take part in public engagement, where feasible with their other responsibilities.
- The College is keen to support participating pathologists' needs in terms of training and support at events.

Who are these sessions for?

The target audience for these sessions will be A-level Biology and Chemistry students.

1.2 What is public engagement?

Public engagement with science and technology is a term used to mean both political consultations with publics and activities organised for informal or social learning purposes. Public engagement involves dialogue with publics, rather than simply advertising science or pronouncing expertise. The majority of NPW activities developed by the Royal College of Pathologists are based on the informal social learning part of the public engagement spectrum. This session involves taking an activity into school to complement formal learning structures. These sessions have been designed so that students, their teachers and participating pathologists can have interesting discussions, drawing on all their backgrounds.

1.3 What do I need to do?

First, you will need to read all the materials provided. This session is designed to be run with approximately 20 students, using only two of the scenarios. To include a degree of flexibility and choice, we've developed three scenarios for use on the subject of organ donation. You will need to choose the two that most interest you or most suit your background knowledge.

Included in this pack are a set of national curriculum links for AS and A2 biology, these are for your information when organising sessions with teachers. Linking to the national curriculum helps teachers see how the session will be relevant to their students. Feel free to supply a copy to teachers who are interested.

Before delivering the session run through the PowerPoint and the materials a final time. Prepare your personal introduction and think about how you will describe your job and your background. Students will be interested in you as a person.

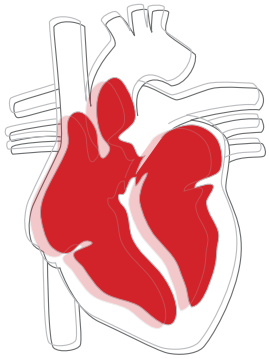
When delivering the session be sure to keep an eye on the time, it's easy to run over. Be prepared to join in with the students in their group discussions, and move from group to group. And finally, remember no two sessions are ever the same, so be flexible and have fun!

1.5 The scenarios

All the scenarios have the same format and are based around making a decision. Students receive discussion cards outlining the scenario background and suggested discussion points. Split them into groups of at least 4, and within their group they discuss one side of the argument presented. After 15 minutes these starter-groups split into pairs (or threes) and join with a different pair/three who had been discussing the other side of the same scenario. This new group present each other with their arguments, discuss them and make a decision, which they then present back to the whole class, along with the background to the scenario and their reasoning.

Scenario 1: Life or death

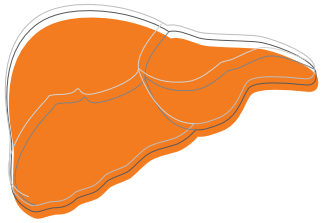
(decision based on patient rights and choices)



- Sam is 15 years old and has been ill for most of his life. You (students) are part of a team of pathologists and doctors who have to make a recommendation to a about his care.
- Because Sam and his parents disagree about what should happen next, the hospital has gone to court to ask for a legal decision to be made about what action should be taken.
- Half the group will start from Sam's perspective while the other half will start from his parents' perspective.
- Spend the first **15 minutes** in your own group, read through the information on your cards and talk through your points about Sam and the reasons behind them.
- Then split into pairs and threes, find a pair/three from the other group and spend the second **15 minutes** Sam's perspective and his parents' perspective.
- Make your decision, choose a spokesperson and get ready to present your decision and the reasons for it to the whole group.

Scenario 2: Two patients, one liver: you decide

(Decision based on a one organ, two patients' scenario)



- Two people need a liver transplant but only one liver is available. You (students) are on the panel of doctors and pathologists who have to decide which patient will receive the new liver.
- Split into two groups, one group will argue on behalf of the first patient and the other on behalf of the second patient.
- Spend the first **15 minutes** in your own group, read through the information on your cards and talk through your points about why your patient should get the liver and the reasons behind them.
- Then split into pairs and threes, find a pair/three from the other group and spend the second **15 minutes** discussing which of the two patients should get the liver transplant.
- Make your decision, choose a spokesperson and get ready to present your decision and the reasons for it to the whole group.

Scenario 3: Opt in/opt out?

(Decisions about organ donation legislation)

- You (students) take on the role of pathologists involved in making recommendations about new organ donation legislation.
- One half is trying to push a new pro-donation policy through and the other half is fighting against the new legislation.
- Split into two groups, one group will argue on behalf of the new legislation and the other against it.
- Spend the first **15 minutes** in your own group, read through the information on your cards and talk through your points about why the legislation should be passed and the reasons behind them. Then split into pairs and threes, find a pair/three from the other group and spend the second **15 minutes** discussing the legislation. Make your decision, choose a spokesperson and get ready to present your decision and the reasons for it to the whole group.

1.4 How does the session work?

The scenarios have been designed with the following learning outcomes in mind:-

1) Participants engage with a *real* pathologist, their work and their experiences.

2) Participants explore the social/ cultural/legal and ethical issues involved in organ donation and the pathology associated with it.

3) Participants become more aware of the central role of pathology in the health of living patients and the multi-disciplinary teams involved in patient care

4) Participants develop an understanding of the complexity and difficulty involved in making medical decisions about people's lives.

The sessions are designed to last an hour, and the outline of the sessions is below, as a guide to give you an idea of what we had in mind, (of course you are not expected to ask all of these questions word for word!) It can be very helpful to keep the approximate timings in mind, but be prepared to be flexible as students often ask more or fewer questions than you expect. The PowerPoint included in your pack contains a very brief introduction to pathology, a short quiz about organ donation and a holding slide you can leave up during the discussion with the instructions for working through the scenarios. You can use the PowerPoint to help structure the session.

- **Intro from pathologist with PowerPoint backup:** Hi, my name is…., I am a …., I work at the ……., in a team of …… Q: who knows what pathology is? (see power point) how many people here are organ donors? **(5 mins)**

- **Very short quiz on PowerPoint (5 mins)**

- **Session introduction:** "Today we're going to…… **(5 mins)**
You (the students) will take on the roles of pathologists having to make key decisions about organ donation. Some of you will have to make decisions about patients and others about organ donation laws that will affect the whole country. You'll have discussion cards with information about the problem your group will have to make a decision about and I'll be here to help you with more information or ideas. At the end of the session you're going to present your decisions, and the reasons behind them, back to the group. The scenarios are all fictional, based on hypothetical characters or legislation. However, the information behind these scenarios is real, people do have to make decisions about transplants that affect patients' lives and the government is carrying out consultation on changing the organ donation system."

- **Discussion:**
1. Split group in half. Each half gets one of the scenarios. These halves then need to be split into half again, with each new half taking on one side of the argument in their scenario. They get **15 minutes** to read through their information and discuss their arguments within their advocacy group.

2. Then they split into pairs or threes, team up with a pair/three from the other half of their group and discuss the other side of the same scenario for **15 minutes**. At the end, a spokesperson from each small discussion group reports back the outcomes of the discussions and the reasoning that took them there.

- **Students report back to whole group: (10 mins)**

- **Wrap up:** Thank the students and pull together a conclusion based on the kinds of discussions the groups have had **(5 mins)**

- **Q:** how many people would now consider becoming a registered organ donor?

2. Top tips for facilitating classroom discussions: Public Engagement Skills for Pathologists working with young people

Adapted from Top ten mistakes made by researchers when presenting to young people by Paul McCrory **www.think-differently.co.uk**

- **Don't assume that students are more interested in your topic than they are in you as a person.** Specialists tend to be passionate about their subject, and can be surprised to find that their audience are usually more interested in them than their work. People are more interested in people than anything else. Take advantage of this universal human trait - share personal stories; explain why you are so passionate about your subject; let your personality "leak out". Get them to like you as a person. Smile.

- **Don't offend or embarrass the audience in any way.** Teenage audiences, in particular, can be very sensitive to any possibility of being embarrassed or patronised. You need to win their trust quickly, and treat them with respect at all times. It should go without saying that, like any professional presentation situation, you need to take account of the nature of the audience and avoid any inappropriate language or content.

- **Don't try to be cool.** Again this may seem obvious, but if you're not 16 years old, don't act as if you are. You don't need to change your dress style or adopt their slang – just share your interests with them in a conversational and relaxed manner. Making references to popular culture to help you connect with them can be helpful, but if you do, make sure you research your references properly. Celebrity trends, music, and technology change very quickly in the world of a teenager.

- **Remember to be interactive.** School students crave constant interaction. If you take the risk to be interactive with them, they will respond if they like you and trust you. Ask lots of questions; bring volunteers up to help you; encourage them to ask you questions (unless they are very young in which case you'll get myriad enquiries unrelated to your subject); and get the audience to raise their hands to have collective votes on issues.

- **Don't try to do too much.** Most presenters commit this mistake every time they speak. Less is often more. With younger audiences it is particularly important to identify a couple of key messages and concentrate on conveying these in a variety of different ways as powerfully as you can. If you cannot sum up your central point in a single sentence in your head, you probably haven't thought about it enough. Presentations are good at persuading, conveying emotions and giving the "big picture". They are very poor at communicating details.

- **Don't let the presentation dull your enthusiasm.** When you present in front of people your emotions tend to get "flattened out" by the time they reach the audience. This is why many presenters feel that they are being much more vocally and physically expressive than they actually appear to the students. The larger the crowd and the younger the audience the more animated you can afford to become. It will seem unnatural to you, but it will read completely normally to the audience. They will, in fact, become infected with your enthusiasm.

- **Remember to make them care.** Self-interest is a very strong motivator. You must search for interesting examples and applications of your subject that the students can relate to in their everyday lives. These connections will help to bring your research alive for the audience.

- **Don't forget that you are "cursed by knowledge."** As an expert it is very hard to genuinely appreciate what it was like before you had this deep level of understanding. The greater your expertise, the more "cursed" your explanations can become. You therefore need to think very carefully about all your explanations – introduce jargon alongside other more accessible phrases; chunk your explanations into smaller steps; and give time for new information to be absorbed. Judging the correct level to pitch your ideas at is difficult without a lot of experience in working with students of different ages. So make it easy for yourself – talk to the students before the presentation if you can; ask questions during the talk to sense where they are coming from; and always consult the teacher before the visit about how much they may already know about the subject.

- **Try not to show fear.** Unlike most adults, children and young people have not learnt to disguise their feelings of boredom in the presence of speakers they cannot relate to. They also tend to be more unpredictable in their behaviour. Try not to let these concerns show when you present to them. Remember that the audience almost always wants you to succeed - your insecurities will just make them uncomfortable too. Adopt confident body language, slow your delivery down, and use strong eye contact. You can fake it.

- **Remember that holding the attention of your audience is paramount.** Regardless of the goals you have set for your presentation (eg. communicating information, engaging in dialogue, changing attitudes), remember that you cannot achieve any of these objectives until you first gain and hold the attention of the students. Attention is a necessary, but not sufficient, condition for any learning outcome. Some students may already have an inherent interest in your subject. The majority, however, will not, and the most effective way for you to motivate these students is to provoke their emotions with "hooks" throughout your presentation. Use hooks to create curiosity, uncertainty, anticipation, surprise, amusement, amazement, joy of understanding, wonder, and to evoke their imaginations.

- **Presentations are not the only way to engage with people.** A myriad of other engagement practices go hand in hand with presentations and it is very likely than any outreach session will include more than one kind of engagement technique. For example, a session might include presentations, discussions, games, hands-on activities, tours, or just about any kind of activity. Depending on the activity, your role might change dramatically, from 'expert/information resource' to 'facilitator' to 'discussion participant'. As always preparation is the key to success, thinking about the different roles you might take on during an outreach session and be prepared for these changes in emphasis. Often these can really work to your advantage. Presentations emphasis the 'expert' side of your work, but all the other techniques (discussion and so on) will show students that you are a normal person, which can lead to more fruitful and in-depth engagement.

National Curriculum links for this session (16-19 year olds)

What will students learn?

These resources are intended to support the delivery of the AS and A2 Biology curricula through subjects relevant to pathology. The links below cover Biology content for AS and A2 from the AQA (A - Human), the CIE and the OCR exam boards in the UK.

Pathology focus	Topics covered in syllabi
General pathology	• Cell structure and organisation • Specialised cells, tissues and organs • Disease may be diagnosed by a variety of techniques • Drugs are used in the control and treatment of disease • The functions of the liver and kidney are essential to homeostasis • The use and abuse of drugs • Effects of alcohol
Tissue pathology	• Cell structure and organisation. • Specialised cells, tissues and organs • Disease may be diagnosed by a variety of techniques
Microbiology	• Bacteria and viruses are examples of pathogenic microorganisms • Mammalian blood possesses a number of defensive functions • General mechanism of defence against disease
Biochemistry	• Cell structure and organisation • Specialised cells, tissues and organs • Transport in humans • Circulatory system • General mechanism of defence against disease • Disease may be diagnosed by a variety of techniques • Drugs are used in the control and treatment of disease
Organ Donation	• Cell structure and organisation • Specialised cells, tissues and organs • The functioning of the heart plays a central role in the circulation of blood and relates to the level of activity of an individual (Heart structure, Heart function) • The blood system is a mass flow system which moves substances from one part of the body to another. It is linked with exchange surfaces (Lung function) • Non-communicable disease includes heart disease and cancer (The biological basis of heart disease)

Immunology and Virology	• Circulatory system • The use and abuse of drugs • Bacteria and viruses are examples of pathogenic microorganisms • Mammalian blood possesses a number of defensive functions • Principles of immunology • Drugs are used in the control and treatment of disease
Haematology	• Circulatory system • Specialised cells, tissues and organs • Mammalian blood possesses a number of defensive functions
Multidisciplinary medical care	• Disease may be diagnosed by a variety of techniques
Clinical Chemistry	• Cell structure and organisation • Specialised cells, tissues and organs • Circulatory system • Mammalian blood possesses a number of defensive functions • Disease may be diagnosed by a variety of techniques • Drugs are used in the control and treatment of disease
Social implications of pathology	• Spiritual, Moral, Ethical, Social and Cultural Issues • European Dimension • Legal issues

In general the activities aim to balance the following approaches:

• **Being creative and developing independent learning**
Using imaginative and empathic thinking, to understand people's motives and experiences. (i.e. Why some people may feel differently about organ donation than others) and encouraging students to ask their own questions.

• **Developing critical awareness**
Stimulating debate on difficult issues. (i.e. the need for 'consent' in use of human tissues and donation).

• **Developing sensitivity**
Encouraging understanding and respect for people with different values and opinions. (i.e. Many cultures view transplantation of organs and blood very differently to western medicine, for example, Jehovah's Witnesses do not accept organ donations).

• **Developing communication skills**
Using peer-to-peer discussion to develop communication skills, classroom presentations and feedback to foster students' abilities to articulate ideas clearly and to develop arguments.

• **Exploring the social and cultural issues** in which science is embedded
Contextualising issues around organ donation such that the wider social and cultural factors involved inform students' discussions and learning (i.e. what would the ramifications of changes in donation legislation be?)

University of Cambridge International Examinations (CIE). www.cie.org.uk/docs/dynamic/31326.pdf accessed 20.07.09

AQA exam board, Biology (A) http://web.aqa.org.uk/qual/gceasa/bioa.php accessed 20.07.09

Oxford Cambridge and RSA Examinations (OCR), http:///www/ocr.org.uik/Data/publications/key documents/AS ALEvel GCSE Biology Specification.pdf accessed 20.07.09