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Examiners' Report

June 2011

GCSE History 5HB03 3A

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Introduction

This was the third series of this 2009 Schools History Project Source Enquiry. The topic for this series was Surgery and dealing with blood loss. Most candidates were however able to demonstrate responses that were worthy of at least some credit. There was evidence that more responses were achieving the higher levels required by the mark scheme. There remain a number of areas where candidates' responses could improve and hopefully the following report will help them achieve that. There was evidence that many centres had learnt from the experience of the first two series. That said there was evidence that some candidates experienced difficulty in terms of allocating time in the examination to questions in relation to the mark tariff that they are worth. Too many long answers to questions 1 and 2 were answered with much more effort and depth than many responses to question 5. The latter was despite the fact that question 5 had many more marks allocated to it. There were fewer responses written in the wrong sections of the answer book. This is a particular problem in responses to question 4 which instead of using the next page of the answer book after completing the first page of question 4 continue their answer on the last page of question 3. There were far too many simplistic responses concerning the value and utility of sources. Many of these are inaccurate and misinformed. Too many responses saw all primary sources as reliable and useful and secondary as worthless.

As mentioned in previous reports the value of tackling questions under examination conditions is a useful way of preparing candidates to respond appropriately to the demands of an examination under timed conditions.

Question 1

Question 1: Candidates had obviously been well prepared for this type of question. It also served well to introduce many of the key themes that the enquiry dealt with. A very high proportion of candidates were able to identify the key elements of room / dress / furniture and other equipment / pain / blood loss / infection. Most were able to develop the identifications into brief explanations that justified in many cases the top mark. There was a slight uncertainty as to whether the patient was awake or asleep but the greater majority thought he was awake and in pain. There was the usual anxiety in Question 1 to off-load the candidates' precious much memorised ARK before it was forgotten, resulting in some factual content which was not asked for and which could not be rewarded. This could also result in extended answers which were excessively long. This length (for a maximum of 6 marks) was often achieved at the expense of richer pickings for able candidates later in the paper.

There was evidence of candidates at all levels answering the question "What was surgery like in the first half of the nineteenth century?" rather than the question actually asked.

A response that made several inferences and provided support from the source achieving level 3 was this:

"From Source A I can learn that surgery in the first half of the nineteenth century was very messy and unclean. I can see this from the picture showing an operation in the first half of the nineteenth century where there is blood all over the patient, all over the surgeon and all over the floor, this shows us that blood loss had not been controlled in the first half of the nineteenth century.

Secondly from the source I can see that anaesthetics (pain relief) had not been developed. I can see this from the picture of the patient writhing around in pain and the surgeon's helpers trying to restrain him".

Answer ALL questions.

Look carefully at the background information and Sources A to H in the Sources Booklet and then answer Questions 1 to 5 which follow.

1 Study Source A.

What can you learn from Source A about surgery in the first half of the nineteenth century? (6)

Operations took place in houses. This house looks very big and poor. This suggests that only rich people could afford them. Surgeons are wearing ordinary clothes, this could suggest that people at that time didn't realise how germs could be passed on people clothes could be passed on a cause infection. Three men are holding the patient down and the patient

is ~~trying~~ ~~to~~ moving or trying to escape from the pain of the operation. The fact that the patient is in pain suggests that ~~he~~ ~~is~~ this operation took place before anaesthetics. There is a large amount of blood on the floor and splattered on the wall. This shows us that controlling blood loss in the first half of the nineteenth century was not undertaken or performed correctly/well. The surgeon is performing an internal operation. This suggests that proves that some ~~surgeons~~

Surgeons attempted ~~ent:~~ internal operations in the first half of the 19th century.



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Examiner Comments

A good response with several inferences and support. It achieved maximum marks.



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Examiner Tip

Make two or more inferences and make sure to use the source in support of your answer.

Question 2

Question 2: Most candidates answered this question very well, with many being placed at the top end of Level 2 or well into Level 3. Many answers, however, were largely descriptive, lacking the analytical element that would have got the candidates into Level 3. The Level 2 answers tended to be a little descriptive and the candidates just wrote all they could about the content of the source. Whilst these were often very good answers, they failed to address the tone of the source and the overall point that the author was trying to portray. Furthermore, some Level 2 candidates wrote at length about the provenance of the source but failed to fully address the question. It is possible that a number of these candidates failed to fully grasp the wording of the question. It may be that the term 'impression' caused some candidates difficulty. However like 'message' this is a word that will be used often in this question and candidates should be aware of how to tackle it.

The answers that reached Level 3 were very good. Level 3 candidates developed their impression of surgery by incorporating the way that the source was written into their answers. Successful candidates made use of key words in their responses such as 'rapid' and 'immediately' to illustrate the need for haste during an amputation in the 19th century. One Level 3 answer in particular used the tone of the words to great effect by writing 'words such as "rapid", "clamped", "screams" and "cut" giving the impression that surgery was brutal in the mid-nineteenth century'.

A small number of candidates attempted an analysis for content and nature, but often these were weak in at least one of the aspects.

2 Study Source B.

What impression has the author tried to give of how surgery was performed in the mid-nineteenth century? Explain your answer, using Source B.

(8)

Richard Hollingham, a scientific journalist has written a secondary source in 2008 of his description of amputation in the 1840's. His language used to describe the amputation is very blunt and to the point, simple to understand, a bit like their knowledge of surgery in 1840 really, 'Liston puts the knife away and grabs the saw', very simply written, surgeons during early nineteenth century thought operations like this were simple, obviously not taking into account; bloodloss, infection and pain.

'Mr Lister, picks up his favourite knife', he has picked up his favourite knife, maybe suggesting he uses it alot? Bad infection control. 'Richard Hollingham' also makes it clear that during the early nineteenth century there was no concept of a sterile environment 'leg drops into a waiting box of sawdust', 'holding the thread in his mouth' these ideas wouldn't even be thought of being used again today as they would with no doubt cause infection.

The title of this source 'Blood and guts' is gruesome and portrays the barbarity of these operations without any anaesthetics or antiseptic ideas. 'It has taken just 30 seconds' to amputate a leg, very quick, time is very limited during operations because of the pain, 'patient screams with pain'. 'Richard Hollingham' most definitely captured a unbiased view of surgery in 1840 and highlighted their painis needed to overcome which were, pain, infection and bloodloss



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Examiner Comments

This response demonstrated a good grasp of the impression and thus achieved a good level 3.



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Examiner Tip

Identify the impression first and then use detail from the source or comment on tone and language used to explain how the impression is put across.

Question 3

Question 3: This question was one that caused problems for some candidates. In many cases the 'were effective' part of the question was ignored and candidates simply went through the sources, describing what they thought they said about transfusions. Few were able to comment on nature beyond a very simplistic level, which meant that those who did get to Level 3, were rarely able to achieve 10 marks. Many candidates were still prone to making stereotypical comments regarding the nature of the sources, in terms of primary or secondary. A large proportion of candidates still claim that primary sources are automatically reliable, because 'they are from the time', whereas secondary sources, and worryingly historians, 'were not there' so cannot be accurate or reliable.

Typical answers tended to take each source in turn, commenting on what each source showed about the effectiveness of blood transfusions. Many then included a conclusion that summarised source content, rather than cross referencing the sources.

Some candidates, keen to demonstrate their knowledge, focused on their knowledge of blood transfusions, rather than how far the sources suggested blood transfusions were successful, and therefore failed to address the question directly. Many tried to expand on what the sources said about blood transfusions, by explaining the reasons why blood transfusions were limited in their early years. Some claimed that Source D proved they didn't know about blood groups and used their own knowledge to explain how blood groups were discovered.

A few candidates considered the effectiveness of the sources in promoting/encouraging people to have transfusions and it was obvious that they had misread the question.

When the candidates did focus on cross referencing they were able to identify areas of support and challenge well. Predominantly this was based on the cross referencing of content with less students opting to focus on cross referencing the reliability or utility of the sources. Many candidates started each paragraph with a sentence saying where the source was from but did not expand to make any relevant comment.

3 Study Sources C, D and E.

How far do Sources C, D and E suggest that blood transfusions were effective in dealing with the problem of blood loss during the nineteenth century? Explain your answer, using these sources.

(10)

~~Both~~ All three sources suggest that in some cases, blood transfusions are effective in dealing with the problems of blood loss. Both source C and E suggest that when blood loss is very high, transfusions are often the best option to save the patient's life. Source C says that they should be used as a "last hope to save a life" and source E agrees that ~~the~~ the problems of blood loss were greater than the risk of transfusion. Source D also agrees that transfusions were quite effective as it shows the wife getting

blood from her husband in a clean, calm way.

However source D also shows us that blood transfusions could only take place when both donor and patient were in the same place. This shows that blood could not be stored yet and this made transfusions less effective. Sources E and G also agree that there were many problems of blood transfusions, making ~~me~~ them less effective. Source E states that "many people believed that transfusions were dangerous", showing that ~~they~~ transfusions were often ineffective. Source G shows that there were also lots of alternatives to blood transfusions which were more effective.

Overall, all of the sources show that there were many problems with blood transfusions, such as having to be at the same place for a transfusion, however, all

three sources explain that blood transfusions were the most effective solution to blood loss if all other methods had failed and it was a last resort.



ResultsPlus Examiner Comments

This response achieved Level 3 by identifying areas of both support and difference. However as it failed to consider the nature of the sources, it did not achieve the highest mark in the level.



ResultsPlus Examiner Tip

Avoid just paraphrasing what each source shows. Identify where sources agree or support each other and areas where they don't.

Question 4

Question 4: This was another question where, worryingly, simplistic and often inaccurate comments about nature and provenance, meant that L3 could not be reached by many candidates.

Extracts from responses that were more perceptive include the following:

“For an historian although the perspective of a firsthand account is useful it is much more useful to read something that has taken into account many sources and evaluated and analysed them.”

Equally perceptive was this passage

“Source A ... provides a detailed look at the brutal nature of surgery; rushed and agonising, in the way he has painted blood covering the room. Source B describes in great detail the exact nature of the operation step by step, allowing the reader to picture the scene in their heads. Although Source B provides a more detailed account of the operation itself, it cannot provide the emotional link that the painting can.”

The comments about value for content were, on the whole, well done with references to evidence of conditions, lack of anaesthetics or antiseptics, unhygienic methods etc but this quality was not matched by comments on nature. Too many candidates seem to blindly accept what a source shows or tells. The result is that they doubt everything, for example some did appreciate that being a ‘scientific journalist’ meant Hollingham would have background knowledge but many others assumed that being a journalist meant he was bound to be biased and unreliable.

Some considered reliability but in many cases this was not developed very far. As in question 3 candidates were still claiming that Source A was more useful because it was primary hence probably an eye witness account and therefore reliable. By the same misconception candidates claimed that because Source B was secondary the author would not be as reliable and therefore not as useful. A few candidates even claimed that because of the time gap the author of B had probably forgot lots of information. Furthermore a few a candidates assumed that Source B was an eye witness account and therefore judgements about reliability were incorrect. It was also interesting that some candidates assumed that Source A or B was more useful because ‘pictures/text was easier to understand’ and for Source A, the historian would have to ‘work things out so the historian could be wrong.’

Despite this there were many candidates entering level 3 with good assessments of the usefulness of the sources based on both content and reliability.

4 Study Sources A and B.

Which of Sources A or B is more useful to the historian enquiring into the way operations were carried out during the first half of the nineteenth century? Explain your answer, using Sources A and B.

(10)

In many ways, source B may be seen to be more useful to the historian enquiring into the way operations were carried out in the first half of the nineteenth century. The source is very detailed and mentions every process of the operation ("first cut", "tourniquet", "saw", "sawdust" etc.). This would be useful to a historian who was enquiring about the specifics of operations at that time - unlike source A, which has to be interpreted by the reader as it is just a painting. As well as this, source B may be useful because it is very credible; the author has expertise in the subject (a scientific journalist) and he has 'perspective' on the 19th century surgery as a modern writer (he would be able to look at lots of sources so his own writing is accurate). This suggests that the source B would be reliable for a historian, unlike source A, which is by an artist who it is unlikely has very much scientific knowledge.

However, despite this, source A may be ~~the~~ equally, or if not more useful to a

historian. The greatest merit of source A is that - unlike the author of source B - the painter was alive at the time of 19th century surgery. This means that the image is a first hand impression of the scene, ~~that~~ ^{which} therefore may be more accurate ~~that~~ than source B. As well as this, despite the fact that there are no specific written details in source A, it can still be used to learn about the operations. Unlike source B, source A includes ~~personal~~ information about the surroundings of the operation - rather than just the actual method. This may be very useful to a historian as often the problems of surgery arise when there are bad working conditions. Whilst source B describes an unusually fast operation (even for that time), source A focuses on the everyday operations (which we can tell because it is taking place in the home).

^{However,} Despite the benefits of source A as a first hand impression, it may be said that it is not ^{as} ~~very~~ useful to a historian as source B. As a painting, source A is only an impression, and we must ask if it has been sensationalised to make a more interesting piece of art. Source B, despite ~~being~~ employing dramatic language

choices, has the benefit of perspective on that period of surgery, so it is more reliable and useful to the historian.



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Examiner Comments

This is a detailed and effective level 3 response. It outlines the strengths and limitations of both of the sources.



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Examiner Tip

Make use of each source's provenance to establish its nature, origin and purpose. Use this information as well as the content of the source to comment on its usefulness to the historian.

Question 5

Question 5: A wide range of answers were given by candidates. Many reached level 3 and selected scientific knowledge as being more significant, than war or other factors such as technology in improving treatment of blood loss. A few candidates considered individual genius and the role of governments and at least one identified luck as a factor.

A number of candidates included figures like Paré or Simpson in their answers. Others went off on a tangent to talk about carbolic spray and other antiseptics rather than focusing on blood loss, which limited their responses.

Numerous candidates' responses were on the short side and only considered one or two factors, many of which were unbalanced. Some candidates still responded with answers that were less developed than the mark tariff for the question would have justified. However the great majority of candidates were able to arrive at this question and at least attempt to complete it. The majority hovered between level 2 and low level 3 responses. Although students were able to identify the focus of the question - namely the issue of scientific knowledge and whether it was a reason for dealing with blood loss, detailed knowledge about scientific knowledge or indeed other factors that contributed to the improvements in managing blood loss was on the whole weak. Those that did arrive at Level 3 mostly focused on either scientific knowledge or war with the vast majority of level 3 responses putting together an argument about scientific knowledge. The vast majority of candidates dealt with the sources separately, e.g. 'source F says ...', 'in source G it says that Karl Landsteiner identified blood groups'. Students found F more difficult to interpret and often just copied out information from the source without an understanding of the link to blood loss. Students found G easier to use, as many students could see how the discovery of blood groups aided the effectiveness of blood transfusions.

Those that focused their responses on the factor of scientific knowledge and could support their responses with own knowledge often cited the fact that there was no way to store the blood before WW1, that the discovery of sodium citrate allowed blood to be stored effectively and therefore this meant there was no need for person to person transfusions.

The question was a good discriminator and clearly allowed more able candidates full rein to demonstrate their capabilities to select, analyse, synthesise and draw an effective conclusion.

***5 Study Sources F, G and H and use your own knowledge.**

'New scientific knowledge was the main reason why methods of dealing with blood loss improved in the period before 1918.'

How far do you agree with this statement? Use your own knowledge, Sources F, G and H and any other sources you find helpful to explain your answer.

Intro for - reliability
Against - reliability
conclusion
(16)

In the period before 1918, there was much improvement in the ways ~~available~~ which were available to deal with blood loss. This was as a result of new scientific knowledge, ~~and~~ technological innovation and the advances made by war and the way it caused a rapid increase in the rate of developments.

Source F describes how the invention of Catgut Ligatures by Joseph Lister revolutionised ~~the~~ the way in which blood vessels could be tied off to prevent bleeding. Even though this was a technological invention, it has its origins in science, as Lister was first drawn to using carbolic acid (which the ligatures were soaked in) by the work of Louis Pasteur and his Germ theory. This was a combination of factors that provided this improvement.

Source G tells us of Karl Landsteiner's discovery of blood groups in 1901, and how it set the path to blood transfusions being readily available to combat blood loss. It does however tell us that a storage solution was not discovered until around the first world war, which limited the immediate impact of Landsteiner's work. This was an improvement due to new scientific knowledge, but it was limited for the time being until further research and technological advances made it work in practice, without need for an immediate donor.

Source H shows us how the introduction of bottled blood supplies during the first world war saved hundreds of soldiers' lives, by providing the means for a blood transfusion which could deal effectively with blood loss. This technology was available due to scientific innovation by Richard Lewisohn who discovered that adding sodium citrate to blood stopped it clotting, and Francis Ross and James Turner who discovered that adding citrate glucose preserved it even longer. This was purely new scientific knowledge which led to these advancements in the methods of dealing with blood loss.

The reliability of these sources is very good, and they should be trusted as they are photographic evidence and from historical textbooks and the personal records of Joseph Lister. They are all well reasoned.

Overall, I believe that it was a combination of factors which led to improvements in the ways of dealing with blood loss up until 1918. The war provided the catalyst to speed up research and scientific innovation, it gave them a reason to work harder, which is why many discoveries occurred just up to and during the first world war. Scientific knowledge did however play a big part.



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Examiner Comments

A good Level 4 response.



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Examiner Tip

Allocate time to answer this question effectively. Make use of relevant sources (not all of them) and combine with knowledge of the topic or its context.

Grade Boundaries

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