HOUSE OF LORDS

Public Services Committee

Uncorrected oral evidence: Medicines security

Wednesday 5 November 2025

Noon

Watch the meeting

Members present: Baroness Morris of Yardley (The Chair); Lord Blencathra; Lord Bradley; Lord Carter of Coles; Baroness Coffey; Lord Laming; Lord Mott; Baroness Pidgeon; Lord Shipley; Baroness Wyld.

Evidence Session No. 4 Heard in Public Questions 45 - 53

Witnesses

I: Andrew Davies, former national Director of Hospital Pharmacy for NHS England; Amandeep Doll, Director for England, Royal Pharmaceutical Society; Richard Bowers, Lead Clinician, Medicines Procurement and Supply, Leeds Teaching Hospitals NHS Trust.

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Examination of witnesses

Andrew Davies, Amandeep Doll and Richard Bowers.

Q45 **The Chair:** Welcome to this meeting of the Public Services Committee and our session on medicines security. I welcome our witnesses who have joined us today and start by asking them to say who they are and where they are from.

Andrew Davies: I am formerly director of hospital pharmacy for NHS England. I am semi-retired now and work as an adviser/consultant supporting NHS trusts and others around medicines.

Amandeep Doll: Hi. I am director for England at the Royal Pharmaceutical Society. I also work as a hospital pharmacist in practice. The RPS represents members who work across pharmacy in primary care, secondary care, industry and academia.

Richard Bowers: Hello, everyone. I am the lead clinician at Leeds Teaching Hospitals, responsible for medicines procurement and supply.

Q46 **Lord Blencathra:** I have no interests to declare. I have a couple of questions relating to how resilient our existing supply chains are. First, what is the operational impact of shortages on hospital pharmacies, your teams and patients?

Andrew Davies: I shall answer from my previous role. About 11,500 lines of medicines are used in hospital pharmacy—different packs to everything else. As of last Friday, there were 176 shortages. It is quite a small number, but it has a big impact. I can probably give you some numbers. Let us imagine you have shortages; you need a number of people to help address them. You might need somebody to change the computer system; you might need somebody to phone up the supplier and get a different supply; or you might need a highly specialised pharmacist to change a prescription and talk to a consultant—so there is a range of people. There is something called NHS benchmarking, which is the in-house benchmarking service for the NHS. It covers fewer hospitals now; 44 supplied data last time. In their last set of data, they said that 39 hours a week were spent in each trust as an average on managing shortages. I have done other work with a region in the UK and its average was 74 hours a week. That is 5,200 to 9,800 hours per week spent on supporting shortages across the NHS, so it is a huge resource of time being spent on supporting shortages. Then you have the national teams and the regional teams added on to that, so there is a big impact for a relatively small number of shortages.

Lord Blencathra: It is a small number of shortages, but there could be an impact—it could be thousands of people needing that one drug. When you say "managing" the impact, does that mean other doctors are approached? Can you substitute? "You have asked for medicine X; can we have Y instead?" Is that what you mean?

Andrew Davies: Yes, it is that type of thing, or it might be changing a pathway for the patients in hospitals. There is a lot more flexibility than there would be in a community pharmacy to change things. You have direct access to the clinicians to have the conversation, or you have pharmacists with the skills to make those changes. It is a different type of environment from the community pharmacy, where it is very set and you can supply only the one thing.

Amandeep Doll: Andrew has already touched on pharmacist team time, but it also requires working with the multidisciplinary team—working with doctors in their specialist area in finding those alternatives—and the nursing team, because if they have to administer something in a different route or form, that has to be communicated to the nurse and the guidelines changed, and then we have to make sure that that is disseminated across the wards that are impacted, so it has a wider implication than for the pharmacy team.

It also has an opportunity cost. The time spent in mitigating those shortages could be spent on looking at other patients. It also adds to the impact on out-patient clinics. I know that we are focusing on secondary care, but if there is a shortage in primary care of a specialist drug, they would have to come back to an out-patient clinic to get a different prescription, so it has an impact on the wider system.

Richard Bowers: The short answer is no. I would not describe it as resilient but as very fragile. Just to add to Andrew's comments about numbers, from an LTHT perspective, we have 5,000 product lines and regularly deal with, on average, 150 shortages at any one time. As a numbers game, you could argue, that that appears to be a 97% effective supply chain but, as Andrew said, that 3% generates an enormous amount of work: operational pressure and financial pressure.

There is also an emotional pressure, which is not always identified. The pressure on the medicines procurement teams to get these drugs in is extreme. My purchasing manager said to me the other day that she had stopped her car on the way home and burst into tears because she had spent all day trying to get hold of a chemotherapy drug from a supplier and could not do it, and she felt that she had failed. That was her role. She wanted to get that drug to our patients and could not do it. That human impact when dealing with shortages is really difficult. That is just for the teams trying to get the drugs in, never mind the clinicians having those difficult conversations with patients about treatments being changed at last minute, postponed and sometimes cancelled. It is really significant.

Lord Blencathra: Have you a view on easing the system for pharmacists changing a prescription? You were sitting in the back; you heard the pharmacists before saying that they needed the power to change from one medicine to another without going back to the GPs. Have you a view on that?

Andrew Davies: It is normal practice in hospitals; it has been for 40 years-plus. Generic substitution has always been a thing in hospitals, but being able to have the dialogue with the practitioner is normal. It is business as usual.

The Chair: So in the hospital if you get a prescription, you can change it without having to go back to the prescribing doctor.

Andrew Davies: It depends. If it is a tablet and you have not got it, you can supply a liquid. You do not have to go back and get the prescription changed. You will have a conversation with them and explain that there might be a shortage.

Amandeep Doll: The culture is very different.

The Chair: There is no prescription either, is there? That is not the means of communication.

Lord Blencathra: I got the impression from Mr Bowers that there was a problem in trying to change.

Richard Bowers: No, I think that the change can be done. We are empowered to a far greater degree in secondary care to make those changes. For example, we use an antibiotic called co-trimoxazole as a liquid sometimes. We cannot get the normal strength. We have had to buy in a drug that is half the strength. Our standard e-prescribing system is prescribing the normal stuff at 10 millilitres twice a day, but we are able to supply something at only half the strength, so we need to intervene and change that prescription. That is just bread and butter in hospitals. The challenge is the scale of the interventions that we have to make.

Q47 **Lord Blencathra:** My second question is: how does prescribing policy, such as changes to NICE guidance or prescribing branded generic medicines, affect the supply of medicines? I think you were all sitting at the back and heard the comment about NICE changing the guidance on HRT. Do you have any observations on that?

Andrew Davies: Probably the biggest example is that there has been a lot of work nationally, since about 2018, looking at introducing biosimilar medicines, which are the equivalent of a generic for a branded product but in complex medicine—for example, for rheumatoid arthritis and things like that. I started work for the Department of Health and NHS Improvement looking at productivity and efficiency with Lord Carter. We looked at the supply of biosimilars and how quickly the NHS started using these products, which were new to the supply chain. It was taking 12 to 18 months to start implementing their use. The most recent one was a drug called Ustekinumab a few months ago. The implementation took weeks; I know that there had been lots of planning with the pharma companies and with the suppliers. You have to do the work; you cannot just change everybody from one thing to something else.

It cannot happen with everything. The HRT example is illustrative but there are other policy changes, as one of the previous witnesses talked about, where local policies change; that can have an impact. For the big ones, there is an awful lot of work that goes on, in NHS England, in terms of dialogue with the pharma companies and planning. The Medicines Value and Access team does a lot of work on that to understand how to get product to be available, rather than just opening the gates and turning on the flood taps.

Amandeep Doll: The RPS has produced a report on medicine shortages that tries to capture the scale of the problem. As Andrew said, there is a lot of work that happens around mitigating it, but there are still gaps in the system when it comes to changes in practice and making sure that they are communicated up stream. This has led to not having enough stock in the system to meet demand. Evidence in the report highlights that there is still an issue.

Richard Bowers: In simple terms, key to an effective, robust supply chain are good information and planned changes. Things go wrong where there are unplanned changes and something drops out of stock. For example, a very real shortage that we are dealing with at the moment is in epidural bags. Our contract supplier decided that it did not want to be the contract supplier any more, and that happened in a very short space of time. Nobody was prepared for that. Had notice been given, other companies could have ramped up production or we could have looked at unlicensed imports, but, where a change is made in a short space of time, all you can do is react.

Unfortunately, we find out about two-thirds of the shortages that we experience in our hospital when stock does not arrive. Patients find that astonishing when you say it to them, but we have no idea unless stock does not arrive and we then start to ask questions. We may find out that it will be back in a couple of days or we may find out that it is out until next summer; that makes it incredibly difficult to plan.

Q48 **Lord Carter of Coles:** Good morning. My question is about the effectiveness of information in the supply chain; we have heard evidence from other witnesses on this. It does seem rather lumpy. Obviously, the falsified medicines directive was an attempt to deal with two issues, but can you comment, first, on how bad you think the absence of information is? I was particularly struck by Richard's point just now that you are told rather late in the day.

It seems to me that there are two issues there. One concerns notification of shortages for somebody withdrawing from the market. The second concerns, where there is stock, finding out where it is and being able to redistribute it. Can you, Richard, start with a general view on the weakness of the supply chain information and what we might do about it?

Finally, we understood that there were penalties for people not informing the DoH where there were going to be shortages. Has that ever been enforced, in your experience, with payments or credit sought to correct

that situation?

Richard Bowers: In answer to your question about information, just to inject some optimism, we are in a better position than we were with shortages even a couple of years ago. We are getting better-quality information, and we are getting it quicker. We are in a position where most pharmaceutical wholesalers—all but a couple—now have live stock levels available. That allows you to determine quickly whether there is a problem, whether there is an alternative supplier, et cetera.

We are still hamstrung by the reactive nature of shortages. We are hamstrung in hospital because at Leeds, as with most hospitals, we have very good visibility of what we have in the pharmacy but we have no visibility whatever of what is on our wards, other than what we have supplied; you then take off their average usage. It pains me greatly that I will be sat in the pharmacy and know more about the stock levels in a pharmaceutical wholesaler 15 miles down the road than I do in the wards above where I am. As was the case with the recent shortage, we have to send people out to wards and theatres to see how much stock there is and see whether there is enough to bring back then redistribute. So access to information is good in some areas but very poor in others.

If you want me to touch slightly outside LTHT, I genuinely do not think that you would find a better example of collaborative working across the NHS than in medicine shortages. Our approach as a region—the north-east and Yorkshire—is the most collaborative thing that I have ever been involved in. We have an active Teams chat so, if a trust is struggling or has a question, it will pose a question and a number of other trusts will respond to say, "Yes, we've got stock", or, "We've found it at this alternative supplier". You can get an answer back within seconds, never mind minutes. We get really good support from our regional procurement specialists, the SPS team. Credit goes to Zahir's team because, at the national level, we now get much better data from the national shortages team. However, there are still pockets where we find out too late to be able to do anything.

I will touch on the FMD. From a secondary care perspective, there was a lot of concern about the implementation of the FMD. The general consensus is that it was a sledgehammer to crack a walnut, in the case of falsified medicines, purely because of the extent of due diligence that we do with our own suppliers. Our regular bona fide checks whenever we set up a new supplier are then repeated on a regular basis. We check Companies House information and their licensing situation—that is, their MHRA and Home Office licences. We do everything we can to make sure that we buy good-quality medicines from good-quality suppliers.

When we looked at the FMD, we thought that the risk of a falsified medicine was incredibly small. We supply 5 million packs of drugs at LTHT. I did a little time and motion study based on a supermarket checkout, and I realised that we would have to employ four full-time equivalent people just to scan that volume of drugs; then you get into where the return is on that investment. So, it would be nice to have more

information, but, if we have to commit that amount of resource to getting it, I would prefer to commit that resource somewhere else.

Lord Carter of Coles: Thank you for that really encouraging answer. Amandeep, would you like to come in next?

Amandeep Doll: We are trying to achieve the principles of the falsified medicines directive rather than the actual directive itself—that is, having that data, oversight and visibility of where the stock is. As Richard has already mentioned, the SPS teams do have that regional data, which gives you procurement data of stock, but what is missing is where the stock is on a ward.

In preparation for this meeting, I spoke to a chief pharmacist at King's. Staff there have digitalised that across their system. They have digitalised drug cupboards on their wards, so they know what is where. That has given them visibility so that, when there is a stock issue, they can clearly identify where that stock is and where it can be moved to. That has taken time—it has taken two years of resource and energy to make sure that those systems are live—but it is about how we can utilise the data that we hope to have from the directive and how we can better use it both to digitalise that pathway and to know where the medication is.

That is where the time is taken, as well—in trying to find where the medicines are. I know, again from Covid, that people have gone on wards trying to track tablets or ampoules of stuff. If there is a way of streamlining that, that should be the end goal of what we are trying to achieve here, so that we can mitigate this and react efficiently and proactively to the lack of data in knowing where medicines are.

The other thing, taking it a step further, is the interface between stock levels and prescribing systems. If there is an electronic prescribing system, could it not let you prescribe a drug that is out of stock? You are being proactive in that sense. Again, there is an example in Cambridge: Addenbrooke's has managed to do that, as has King's. It would be helpful if we could reuse that model. It has definitely come out of the report that local trusts and regions are making great efforts in managing this, but do we need to centralise it, in a way, or take learnings from each region and try to make it less burdensome so that we do not have lots of different models?

Lord Carter of Coles: Andrew, you have a national perspective. What do you think?

Andrew Davies: I am probably looking at it from the other lens to Richard, as I would suggest that the NHS has world-leading medicines data about visibility of what is in stock in hospital pharmacies, but I echo the comments that you do not know what is on the wards. I have a bias, in that I was involved in commissioning it, but you have evidence submitted from the company that provides it. As of 11 o'clock this

morning, every single stock in hospital is visible to the NHS—that is, what is in stock and what has been issued since yesterday.

That system exists. It pulls that information in automatically. The Department of Health, NHS England, NICE and others can access it, and individual hospitals can access their peers to understand it. That system is there, and it was essential. It was put in for Brexit planning. It was vital for Covid. It was how we managed to keep medicines out of the headlines in terms of planning on the clinical side; what was available; what we needed to change; and where the shortages were.

There has been mention of the NHS Specialist Pharmacy Services—the SPS—which has procurement teams that do, to echo what has been said, an amazing job. The operational shortages team at DHSC has also been doing a fantastic job for many years. Both of them use that data, which allows that forecasting, planning and understanding. It could be used more. There are times when orders do not turn up, but that intelligence does not always get pushed back up into the system effectively—or, if it does, it does not always bounce back. It is about that collaborative piece, which perhaps needs some work.

There is a challenge there around the confidentiality of some of the data that the DoH has and how that gets back, but there is a huge amount of work going on. It does not always get cascaded down to the front line because everybody is running around and trying to provide that information.

I was involved with the falsified medicines issue. I challenged the dogma that it was going to be about just decommissioning to prevent falsified medicines because, to me, that was never the real benefit. Having the barcodes on the pack, being able to look at serialisation and digitising that supply chain would have had so much value in terms of patient safety, visibility of product, costing, assurance and tracking. That was never part of FMD. If something replaces that in future, it should be something that supports those things.

I know that you have had evidence in your submissions from one proponent of a system. It needs to be focused on those things and not just on falsification—although I have recently heard about occurrences of falsified medicines, particularly weight loss drugs, appearing in the supply chain and people ending up in the ITU because of them. It is a small nut to crack, but there are so many other benefits that could come from the falsified medicines directive across the entire supply chain.

Lord Carter of Coles: Let me bring this question to a close. One of our witnesses talked about the barcoding coming off when we left the European Union. Would your recommendation be that we try to get those barcodes across everybody supplying pharmaceuticals?

Andrew Davies: The 2D barcodes—the little square ones that have the dot in them—have come off because there is no regulatory requirement. What has happened is that the stripey ones have stayed on because they

have much less information in them. It is just, "This is the product". It is a GTIN but it does not have any additional information.

I would suggest—there is some evidence of this—that pharma companies are not necessarily being as diligent as possible with barcodes. In some areas, as things come into the system, they have reused a barcode because somebody has said, "We like that one in the pack so we'll just reuse it", rather than going with a unique barcode for that product. Companies such as GS1 and the NHS's Scan4Safety programme are really important in terms of informing you how you can use that barcoding and make it bring so much more; for example, you can get the batch number and expiry date. With an electronic system, you have a closed loop to check that something is not out of date, that it is the right drug and that it is going into the right smart infusion pump. There are lots of opportunities here if we do not focus on just the falsified side.

Richard Bowers: Could I add something to that? Pretty much every system that we are looking at in a digital sense, in order to improve the way in which medicines are used in hospitals, requires the use of 2D barcodes because that is how the information is dragged into the system. We are concerned about the fact that GS1 barcodes are not mandatory as part of the licence. Even if you consider the number of unlicensed medicines coming into the country, we are never going to have a system where everything is barcoded, but barcodes are key; anything that we can do to drive them forward is a good thing.

I have one point of clarity on Andrew's comment about the system giving us live drug visibility across multiple organisations. It gives us visibility of only the drug stocks in the pharmacy departments of those organisations—we are still blind to what is on the walls—but each hospital pharmacy department does a midnight upload of its stock levels, and that is visible on a regional and national basis.

Q49 **The Chair:** Can I just check something that has come up before? Is there an agreed definition of "shortage" across the secondary sector? Is it the same definition that exists across the primary sector?

Lord Carter of Coles: I was also going to ask that.

Richard Bowers: I was not aware of a definition until Tom asked me, in preparation for this session, "Do you have a definition?". It is really difficult. I would look at it as being any disruption to the status quo in procuring a medicine—that is, a disruption to the normal arrangement of getting a named drug from a named supplier. If someone must intervene manually in something that should just tick along, that is a shortage. It may be as simple as saying, "We can get the stuff from a different supplier", or, in some cases, "We need a box of 28 but that supplier has a box of 30"; that is fine, but it is still a manual intervention.

It is only when you start intervening that you start to determine whether something is a critical shortage or whether there is an easy resolution. I talked about the 150 shortages. Some 80% of those are relatively

straightforward to manage, but 20% of them are not; they are really difficult. It is only when you start looking at the shortage that you realise whether it is a critical one. I made a list on the train this morning of all the different aspects that we would consider with a shortage. I stopped when I got to 25. Think about 150 shortages with 25 different criteria to assess, often within a couple of hours: that is where the pressure comes.

The Chair: And they do not all have an impact on patients because the intervention works.

Richard Bowers: Our ideal is that there is no patient impact. To be honest, we have a very good pharmacy-led shortages response at Leeds. Our intention is that it does not impact the prescribers either; we sort it within pharmacy.

Andrew Davies: I look at this slightly differently because I think that the shortages can be put into three buckets, if you like. There are the ones that you have been talking about—in terms of supply chain, pharma companies, APIs and manufacture—but there are other bits.

I know that one of your previous witnesses mentioned radiopharmaceuticals and aseptically prepared products, which are injections of, in particular, cancer medicines. The capacity in the NHS to supply those is a significant issue. NHS England has on its risk register an entry on the gap in capacity in supplying chemotherapy. By 2030, 13,000 patients will not be able to get their chemotherapy medicines because there will not be the capacity to supply them; you can extrapolate that figure based on the fact that each patient needs 37 doses per year. There is lots of work going on—Leeds has a facility that is being built, for example—but there is a gap here across the country.

The third bucket is the facility to manufacture those very niche products that pharma companies do not tend to focus on because there is not enough of a market for them. The NHS has a fantastic medicines manufacturing capacity service, but it is very Cinderella in terms of its funding. Most manufacturers are losing money. Most of them are supplying lots of organisations because it is important to the NHS to keep its medicines going.

Again, I am aware of that because I developed a report on it; I also did the aseptics report. Things have not progressed anywhere. If anything is to come out of this, it should be a recognition that this is about not just the supply chain bucket but our aseptic capacity. You cannot make chemotherapy on the ward because it is hazardous; it is not safe for the nurses to make it. You have to make it in a controlled environment. On the manufacturing of those niche products, 1,400 lines are manufactured on a routine basis.

Also, the NHS and the Department of Health talk about packs that have been overlabelled with instructions to smooth discharge from hospitals and have spaces available. Those things are done in these types of

facilities, and there is no national strategy for them. My plea would be that it is broader than just that supply chain.

The Chair: That is very helpful.

Q50 **Lord Laming:** My question follows on neatly from what each of you has said. We would be grateful if each of you could give your perspective from where you are in the system. We have heard examples of: "Things are working well there but there are problems here". It would be very helpful if you could share with us any suggestions that you would make to improve the overall resilience of pharmaceutical services in secondary care?

Richard Bowers: Shall I go first? It will be an interesting answer from me. If I could do anything, it would be to improve the support for community pharmacies, because so many shortage challenges that hit community pharmacy then bounce back to the hospitals.

We heard from the previous witnesses about a drug called Creon, which is a pancreatic enzyme. That just was not available to community pharmacies. They did not have the capacity to trawl around multiple wholesalers to find stock. Eventually, those patients reached the point of exhaustion, going from pharmacy to pharmacy. They phoned the hospital consultant, who checked whether we had stock. We did, and we issued a prescription from within the hospital. In a month, we were supplying that drug to three times the normal number of patients.

So, yes, they were getting treated but at significant cost operationally and financially to the trust. Not all of my secondary care colleagues would thank me for saying it, but we certainly feel that, if primary care could be resourced and had more resilience, the pressure on secondary care would be lower.

Lord Laming: I thought that earlier on, when you were answering Lord Carter's question about information, you drew a contrast between information for the community pharmacy and for the hospital. I got the impression that you were saying that the community pharmacy was much better able to manage this. Did I get that wrong?

Richard Bowers: It is the complete opposite. The resources available to us in secondary care, in relation to senior support, decision-making and intelligence on the supply chain, is at a level greater than what community pharmacy can access. That is either because they simply do not have access to it or they do not have the capacity to access it.

It genuinely feels as though we are just about keeping our heads above the water at the moment; it feels as though community pharmacy are sinking when it comes to shortages. So we would support anything that could be done to help them gain that information.

Amandeep Doll: Collaboration is key here between NHS England, the Department of Health, wholesalers, manufacturers and pharmacists, as well as patient groups. The patient is impacted at the end of this as well.

Whether it is an inconvenience or not getting something, it is a real-life impact on them and disruptive to their life. So there is something about collaborating across the system in recognising the problem, but also recognising warning signs.

We found from the report that we did and the evidence that we collected that people on the front line, and particularly in primary care, can recognise when a shortage is coming, yet there is no way of feeding that back into the chain. Is there a way of being able to collect that data formally so that we can predict things that are going to happen in the future?

On Richard's point about primary and secondary care, currently there is no easy way of being able to supply across the system because of regulations. Is there a way of being able to work through this? There are examples of where this has happened, such as with pancreatic enzyme replacement therapy mitigating that. Is there a way that we could formalise this so that it is not so burdensome when we have to share stock across the system?

I think this would be a really good opportunity to talk about integrated care boards—the systems and pharmacists that play a key role in clinical pharmacy leadership, making sure that they are part of the medicines optimisation team working across the system to enable this. I think collaboration here is really key.

Andrew Davies: I would echo that. I think there is an opportunity to develop further signals of problems coming down the track. Some people push information to the Department of Health and to others, but it seems to go into a black hole and they do not get the feedback that helps them think that this was valuable or helpful.

As regards the IT systems, certainly from the hospital side, the pharmacy stock management systems have functionality that could be utilised to pull that information in, particularly when an order is being placed has not been received within the expected delivery timescale. Hospitals tend to keep more stock.

Lord Carter will know that we suggested 15 days back in 2016. It is beyond that now, post Brexit, pandemic et cetera, but knowing that you do not have a delivery arriving could be a signal of a shortage coming down the track. It is about building that intelligence. It goes back to digitalising the supply chain. If that was done effectively, it would give so many more signals to support the NHS.

Richard Bowers: I want to add one further point. If we are talking about the gap between primary and secondary care, we should probably touch on the contracting element as well. The majority of medicines used in secondary care are contracted for us by the MPSC at national level, or sometimes regional procurement collaboratives.

That stock is often ring-fenced within the wholesalers for secondary care, and we are officially not allowed to then distribute it into primary care without authorisation. So we may have access to stock that primary care does not have, from the same wholesaler. That can be very challenging, when we are saying that such and such a wholesaler does have it, and the community pharmacy is saying no, it does not. As we have heard, that piece about how best to share the stock across the system without breaching contracting regulations is worth further exploration.

Lord Laming: In trying to prove the resilience of the system, what views do each of you have about the possible role of increasing the amount of stockpiling? Is that helpful or is it not helpful?

Andrew Davies: I can reflect on my experience of planning for Brexit. The challenge was that everybody sees all of the products as being essential for their patient groups, which they are, because they expect to get them. It makes it really challenging to say which ones you prioritise. Such things as having additional stocks within country are something that the wholesalers could be engaged with. I know some of your previous witnesses would have views on that. We should be taking some of the pandemic learnings on such things as intravenous fluids, intensive care medicines and products with high-risk APIs.

One of the early witnesses talked about APIs that are perhaps made in one place; a bit like the US has done, there should be onshore APIs. Then if a crunch comes, you have that potential to get it manufactured within the country. You might not necessarily have the facilities, but my comments about the NHS medicines manufacturing might support that as with other pharma companies. I do not believe that the intelligent systems to get to that are there as yet—being able to identify whether there is a single manufacturer source of that API linked to whatever heavy industry it needs to make the APIs and things like that. That intelligence must sit somewhere, particularly with the MHRA, I would anticipate, but how can that be activated and utilised to support this?

I do not think that having huge amounts in a shed somewhere is the best way of doing it. If there is to be a stockpile, it needs to be different from the old way of stockpiling where it was in a shed and it got thrown away when it went out of date at the end. It needs to be cycled through the system; it needs to be utilised. It cannot just be a pile of money sat over there that we throw away in three years. It has to be different; there is a need for thinking around that.

Lord Laming: That is very helpful.

Amandeep Doll: Strengthening the supply chain is probably a better investment. There is a really good example in Glasgow of a more regional approach. It supplies the hospitals and community clinics in that way, so they have a regional stock rather than it being in different hospitals.

There may be other alternative solutions that could be applied as well. At the minute, that would be for secondary care only, but it is a really good

example that could possibly be used for learning rather than stockpiling. What we might inadvertently do is cause problems in another part of the system because the supply chain is so fragile at the minute.

Also, with stockpiling, there is a need to establish what the critical medicines are. We have worked with the World Health Organization list in the past, on Covid, but not everything is critical until it is not available. For example, Creon is not deemed a critical medicine, but it is critical for patients when it is not there. So it may not mitigate against all future possibilities.

Richard Bowers: My opinion is broadly similar to what we have already heard. In principle, it sounds a really good idea. In practical terms, what do you stockpile? How much of it? Who does that? Who carries the waste risk? Who co-ordinates the reintroduction of some of it into the supply chain so that it does not go out of date? It is really difficult.

We have our own critical medicines list at Leeds, which is born of experience of things almost going wrong when we have run out. That has 80-something drugs on it now, so you would be talking about a significant stockpile. The big concern from us when we thought about this was in how to build that stockpile. You cannot just take a month's or two months' worth of stock out of the supply chain to create a stockpile in case there is a shortage because, in doing so, you guarantee that there will be a shortage. It has to be done in a really co-ordinated way with manufacturers to ramp up supply purely to be stockpiled. It would be brilliant if there was a shortage and somebody came along and said, "Don't worry; we have two weeks' worth squirrelled away". But, as we have heard, the odds are that the drug that is out will not be the one that is in the stockpile.

Andrew Davies: And it could only ever work centrally. It could not be done by individual organisations; that would just be a nightmare.

Q51 **Baroness Pidgeon:** I want to pick up on the issue that we asked our previous panel about: the waste from medications. Given that you are in secondary care, the way the medicines are stored around the hospital presumably means that you can recycle medication. Richard, could you talk about that?

Richard Bowers: There are two different words that we choose to use. There is recycling, which is where we might send a specific range of medicines off to a recycling company that can—in the case of inhalers, for example—melt down the plastic to be reused somewhere else.

Then there is reusing those medicines within the same supply chain. We have invested a really significant resource in that at LTHT. We essentially return all medicines that we are assured have been stored appropriately—they cannot have left the hospital site—back into our own supply chain.

Recently, we invested more than £100,000 a year in recruiting staff purely to return part-used boxes of medicines back into the supply chain.

So, yes, it can be done—we are at the forefront of doing it—but it is a lot of work. From a practical sense, you need a huge amount of desk space, because every ward will be asked to put their not-needed medicines into a returns bucket and someone has to sift through it. You need a huge amount of desk space to spread it all out—we have criteria for what to return and what not to return—so it is very labour intensive.

It does generate a return. That £100,000 investment is giving us about £400,000 a year back, as well as the benefit to the supply chain, but we are able to do that; we are a very large acute trust. We are able to commit resource that might not be available to other organisations.

Baroness Pidgeon: Is that so that you can then reuse those drugs because they have been stored safely, and you send some off for recycling?

Richard Bowers: Yes, absolutely.

Baroness Pidgeon: You talked about the recycling of plastic, but the other issue that was raised is APIs. This is about our security of medicines: should we be recycling to pull out the APIs so that we have that in our own country? I think that that was one of the issues raised.

Richard Bowers: I do not know whether that is even technologically possible. We hear from pharma just how much work it puts into ensuring not just that the drug is safe but that the packaging is safe—that is, with the chemicals used. We would potentially have to segregate everything into drug and brand level to guarantee that those packets—those blister strips—of drugs contain only ingredients that can be recycled. I do not know whether that is technologically possible. There is probably a limit to what we can do, and that might be just beyond it at the moment.

Baroness Pidgeon: Does the rest of the panel know whether other NHS trusts are doing the sort of investment that you have talked about? Your team costs £100,000, but you are saving.

Richard Bowers: I am not aware of any named organisations doing it on the scale that we are.

Baroness Pidgeon: That is interesting.

Andrew Davies: I just want to follow on from that because, when I was the chief pharmacist in a trust, we tried to do this. You find that, as the pressure on finances comes, you get pushed on what you can do and what you cannot do. A return probably takes three to five minutes of processing. You have to check the label; to make sure that it has not been tampered with; to ensure that all of the right things are in the box, because sometimes things have been put in; to make sure that the patient's name has been crossed out; and to make sure that it has been put back into the computer and back on a shelf, with a space found for it. That takes three to five minutes.

At the lowest level of staff, the actual cost is 27p per minute, so you are looking at £1.34 to process, as you heard earlier, 800 million packs at less than £1 a pack. There has to be a balance. I commend Leeds on doing that. It is something that has been whittled away at in other trusts, because you would end up with rooms full of this material. It then gets to a point where we cannot deal with it so we get rid of it and will do it again next time. That is a real issue because people cannot recruit staff when there are other pressures. If you are taking resource away to do that, you are not doing other patient-focused things.

There was a report—James, one of the previous witnesses, alluded to it—in 2012 on medicines and better outcomes in reducing waste. That should probably be revisited to look at what has been done. Things such as dispensing for discharge and the reuse of patients' own drugs have been done, but should new things be done now? We have moved on 13 years since that report. The example of Leeds might be one, but there is a challenge in other organisations that do not have the people to do that.

As a personal view, this has to stay within a managed supply chain. I would not be comfortable taking a medicine that had gone out of a controlled supply chain; I would not want to take that if it had gone into a home or whatever.

Baroness Pidgeon: I understand. The example earlier was of it being stored on a radiator in a bathroom or whatever. I get that completely, but it is very different in the acute setting, because medicines are managed very carefully.

Amandeep Doll: I am going to take a slightly different angle to this question. Pharmacists play a key role in prescribing medicines and making sure that they are used optimally. When we are thinking about wastage, it is about making sure that medicines are prescribed appropriately and correctly. This is where pharmacists can play a key role in making sure that prescriptions are appropriate. We alluded in the previous session to the demand from patients who want medication, but pharmacist teams are well placed to think about deprescribing and doing structured medication reviews in the community; those will have a positive impact in secondary care as well.

Again, this is where we can use our integrated care systems, the pharmacists and the medicines optimisation. A document was released not so long ago, *Medicines Optimisation: Helping Patients to Make the Most of Medicines*, which is a good practice document outlining how we can reduce waste and respond to medicine shortages by looking at deprescribing. There is a need to prioritise that again. In the primary care network, the funding has been removed from the DES for similar care records, so it has been deprioritised. Again, a systems-wide approach would be thinking about whether we are prescribing things that are necessary and whether we could stop them and review them for the patient.

Baroness Pidgeon: You talked about community pharmacists there but

is there a role for their GPs in their practices reviewing? They are so overwhelmed that often there is no review of people's medication.

Amandeep Doll: That is why GP practice pharmacists can play a key role in supporting that. There are also pharmacists in primary care networks. There are pharmacists in different parts of the system who could support delivery of these medication reviews.

Baroness Pidgeon: Can we get some more information on the NHS medicines manufacturing service, which Andrew has mentioned twice? I am not sure what that is and it sounds as if we ought to be aware of it.

Andrew Davies: In order to manufacture medicines, you must have a licence from the MHRA. If you are making a branded product or a generic, you will have a product licence for that specific product. The MHRA has specials licences, which allow organisations that have gone through all the good manufacturing practice to make medicines, using the raw materials, to fill a gap where there is not an existing product. They cannot make paracetamol tablets for somebody. They can make something that is not available as a licensed product.

When I undertook the review, there were 24 of these facilities in England, one in Wales and one in Scotland. They make things. They will make everything from a liquid product to a cream to an injection, a range of different things. They will also apply labels to packs of, for example, four tablets that might be needed for a particular clinic or to support a discharge. Those facilities are in hospitals. They tend to be part of a trust. There is a good example. Guy's and St Thomas' NHS Foundation Trust has one. It had a difficult challenge in that it was not profitable. It was losing a lot of money. It has made a concerted effort because of how important it is to all their customers, as they supply across the country, and because by putting a managing director in to look at how they take it forward in a business approach, they can get the right price for the products and assure that supply chain for a place.

This has not happened in all places. A facility is being built in Leeds. There is one in the north-east, from which you have had evidence about the aseptic supply. They are intrinsically linked. The products that are made by the manufacturing facilities could be used to support, by supplying the raw materials to make the injections. These things should be combined and looked at holistically, nationally and probably across the four home nations as well.

Wales has a national programme, the TRAMS programme, which is focusing all this activity into one facility. That has been in place for three or four years. It is not fully working yet, but that is the strategy. There is a real opportunity but a huge risk if these things are not looked at. I talked before about the numbers of patients who potentially could not get their medicines. I can supply more afterwards.

Q52 **Lord Blencathra:** We are 10 minutes away from a vote. I will squeeze a quick one in. I liked what you said, Ms Doll, about nothing being critical

until it is not there. You talked about the difficulties of stockpiling, which I accept, but what is our ability to upscale in Europe? We all like the idea of onshoring and Britain making every medicine, but it is not going to happen. Can you identify, with other European manufacturers or suppliers, some of the things that we could make in Europe so that we have an alternative supply to China or India? Is that fanciful or feasible?

Andrew Davies: It is not my area of expertise. I do not know in terms of APIs; it is a bit too pharmaceutically technical for me.

Richard Bowers: Apologies, but I would also struggle to answer.

Amandeep Doll: Yes.

The Chair: The whole panel struggles to answer that question.

Lord Blencathra: Yes, a straightforward and honest answer from all three, thank you.

Q53 **The Chair:** We will go to the last question then. In our report, the recommendations must go to government, not to anybody else. Do you have any recommendations that we ought to include in our report?

Andrew Davies: I have thought about this and have three. I hope that you can encourage the NHS to build on the world-class data tools that it has got working and has the opportunity to get more out of. I would plea that these are not thrown out, like the baby with the bathwater, when the federated data platform panacea comes in. It will not deliver what is already there. It is important to understand that.

Please do not just think of it as "that pharma bucket, that supply chain and APIs". The aseptic compounded radiopharmaceuticals and NHS manufactured medicines are key. There needs to be strong and effective executive leadership on that. Pharmacy is wonderful at keeping things within pharmacy and managing and getting it done, but it needs that wider visibility. Some of the facilities, such as the north-east, got built because of chief exec buy-in to say, "Get on with it" and bang heads together. Pharmacy is fantastic at fixing things. It needs to be broader than that.

Lastly, there must be the push for that digital supply chain. This includes the renewed impetus around whatever it is that supports avoiding falsified medicines, much wider patient safety, product visibility, and systems opportunities incorporated to maximise benefit for visibility and supply of medicines. That would be key to get from this process.

Amandeep Doll: The RPS report *Medicines Shortages: Solutions for Empty Shelves* made 20 recommendations. I am not going to read out all 20 but draw the committee's attention to three priorities.

The first is this need for stronger collaboration, as I have already mentioned, between the NHS, manufacturers and patient groups, to improve data sharing. This is essential to anticipating and managing

shortages and is a way for pharmacy teams to flag early warning signs into the system to forecast any issues.

Secondly, the information cascade is important for having up-to-date data that is reaching the right people at the right time and is reactive, responsive and without delay. That digital solution of linking up the different parts of the system that are digitalised and interfacing that gives us a better picture of the visibility of drugs from the ward to what is in stock in the pharmacy.

Thirdly, the pharmacy leadership piece is vital. Pharmacists have a lot of insight and experience in managing this. It is about making sure that they are part of the solution when we are thinking about that system-wide approach.

These are broader strategic recommendations, but there are some immediate, straightforward ones that could be initiated. In the previous panel, James Davies mentioned the flexibilities consultation. We want to reinforce that this is a key thing that the RPS advocated for. It would be a good enabler in supporting pharmacists to be able to do their job well. Hopefully it is enabled in a very practical way.

There is also having procurement specialists in ICBs—having someone who is dedicated to resourcing and managing it so that it is not on top of the day job when everyone is already stretched in their job day to day. Maybe there could be a more consistent approach. We have heard that regionally everyone is managing it well, so should we have a more consistent approach nationally to the issue?

We have not touched on value-based procurement—

The Chair: Just briefly, because I am sure you have done your three, but carry on—one last one.

Amandeep Doll: Value-based procurement needs a more consistent approach.

The Chair: That came up in one of our previous inquiries. I can see that point.

Richard Bowers: There are three recommendations from me, the first of which I have mentioned already. Primary care community pharmacy should be given more support in managing shortages. Secondly, greater emphasis and support should be given to pharmacy procurement teams in hospitals. From a recruitment and retention point of view, we have seen over the years that these job roles are not seemingly valued by the Agenda for Change scoring process, which is what our NHS jobs are scored and salaried against. The job that my team do is fantastic, but we are limited in growing that workforce to more senior roles. We have a job description that we have been trying to have approved for eight months now, for example.

The Chair: Is it not seen as crucial?

Richard Bowers: Agenda for Change jobs are based on points. Because of the nature of the work, there are not enough points in enough areas to justify the grade of role that we feel is appropriate. That means that we have to bring people in at slightly lower grades and then grow our own, which takes time and costs money. Unfortunately, those lower grades are the ones that are impacted by visa rules. We have staff on graduate visas, two of whom we will lose next year. We are not on the essential skills list. It is difficult to bring people in. We would love to develop them further into more senior roles, but it is against us.

Thirdly, we have made great strides in the last couple of years. Compared with where we were with the platinum-based chemotherapy shortage this time two years ago, where we came within seven days of having to cancel curative cancer treatment for children in some hospitals, things seem better and more stable. The problem has not gone away, but it is better. We are all conscious that a major national reorganisation is going to take place with NHS England and the DHSC. We cannot lose the gains that have been made. We must keep the pace of improvement going. My plea is to ring-fence those services.

The Chair: The overriding impression is of so many moving parts. I had never put it in the context of a structural organisation as well.

Our timing is perfect—the Division Bell is about to go. This has been an excellent session. Both sessions have been excellent with some fantastic people. We are sorry if you felt rushed. We felt a bit more rushed than we wanted to be, but it has certainly been very valuable. We hope that you will be able to answer any further questions that we have on email or whatever. Thank you very much indeed. We will call that the end of the meeting. Thank you.