

What underlies the unconscious negative attitude of healthcare professionals towards patient-reported drug allergies?

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I recently had the misfortune of once again becoming a hospital inpatient. I had tried being admitted to a smaller, private hospital to avoid being admitted to one of the two teaching hospitals at which I work. But as my delirium worsened and even I could tell I was unwell, I was transferred to one of my hospital workplaces.

My history of a penicillin allergy suddenly became a very important aspect of my care. Each day in my practice, I probably ask 10–40 patients if they are allergic to anything. I thought, or hoped, that I was asking for information as an open-ended question; that is, looking for ‘just the facts’, without any expectations and biases. But until I became a patient, I had never noticed the unconscious negative bias of healthcare professionals (HCPs) towards what patients have to say about their drug allergies. HCPs tend to disbelieve patients until the individual describes exactly what happened and/or which tests have been performed to confirm the drug–allergy link.

I appreciate the reason why HCPs need to inquire about the details of many patient statements, as such statements usually contain what patients were previously told by medical staff. But what I did not perceive was the way we can also pass on a negative attitude towards patient-

reported allergies, an attitude that is so pervasive that we do not even recognize it. The red allergy wristband issued to inpatients in this hospital alerts HCPs to the presence of an allergy, so the question becomes ‘What are you allergic too?’ As an inpatient, my first few responses were simply ‘penicillin’, until I realized that my answer needed to evolve in order to prevent the usual follow-up question of ‘Oooh, what happened?’ I found it amazing that, regardless of the questioner’s country of origin, grasp of English or role within the hospital, there was a certain universal negative attitude in their tone.

After several repetitions of the question, my answer evolved to ‘Penicillin, but it was actually to amoxicillin’, to which the follow-up question was ‘What happened?’ This question is fine, but, once again, I had never picked up the negative tone before. In my practice, I thought that I truly just inquired about what happened, just in case the patient knew what happened with regard to their drug allergy. With regard to penicillin allergies, many patients respond that the allergy ‘happened when I was a child, and I do not know what happened, but I was told I was allergic to penicillin’. Others describe a mild skin rash with no other symptoms or systemic effects, which I believe is the underlying reason for the negative attitude. As HCPs, we are essentially trying to discern patients who had a minor or non-real allergic reaction to penicillin in the past, in whom it is now safe to use penicillin or a similar penicillin-like drug. This is especially important when a simple alternative oral agent is not available and the alternate agent is associated with poor tolerability and/or is an expensive intravenous drug [1].

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Penicillin allergies are self-reported by 10–20% of the population; however, of these, only $\approx 10\%$ have a confirmed penicillin allergy when assessed [2, 3]. Because of the many profound issues related to antibiotic resistance, we should be doing all we can to treat infections with the simplest antibiotics that are effective [1, 2].

In my experience, $\approx 50\%$ of questioners immediately followed the query of ‘What happened?’ with ‘Was it just a rash?’ another negative stereotype almost begging the response of ‘No, I am not allergic. I just made it up to get a red wrist band!’ In response to the ‘What happened?’ question, my fully evolved answer became “10 years ago I was taking Amoxil for an upper respiratory tract infection, and within about 3 days I developed a macular-papular rash all over my body. I felt awful, became oedematous, and developed quite bad diarrhoea. I then spoke to my friend AB, Professor of Infectious Diseases at Hospital Y, and he said ‘I think that you may be allergic to penicillin, stop taking the drug.’ And so I did, and then I got better. I have not had any formal skin testing or other tests to confirm my allergy.” This expanded final version received the response, ‘Wow, that sounds like a real allergy!’.

And there it is! The ‘real’ reason we ask about drug allergies with the unconscious negative attitude. We simply do not believe the reporting of allergy is real until we hear the details, and we do not try to mask telegraphing those doubts. At the same time, we strongly want to avoid patients experiencing drug-induced anaphylaxis or severe allergic reactions [4].

I started thinking about other allergies that some patients claim to have, especially those that seem odd, and how the individual with the allergy is treated. My mother tells everyone that she is allergic to alcohol, which many people scoff or laugh at or do not believe. But it is true; not only does she have an alcohol dehydrogenase deficiency, so do I, the only one of six siblings to do so. As a result of this deficiency, I become very red when I drink alcohol, as do 10% of the population who are white and 50% of those who are Asian. Many years ago, my mother also developed a severe allergic reaction when alcohol comes into contact with her skin. Her face and skin become red and oedematous following contact with alcohol [4–6], even when such contact occurs when someone who has had an alcoholic drink breathes on her. I must admit that even I thought this was strange, yet the observable physical response could not be denied. Upon reading up on this allergy, I found that her condition was uncommon, but well described [4–6].

As my hospital stay progressed, I discovered that specialists in infectious diseases and allergies asked questions regarding my penicillin allergy with no hint of bias. One week following my hospital stay, I had skin tests and an

oral challenge to confirm the presence of a penicillin allergy [1], which showed that I am not allergic to penicillin. Nevertheless, the central intravenous line remained in for another 2 weeks.

So what is the lesson to be learned here? The unconscious negative attitudes towards patient-reported drug allergies appear to be more social and psychological in nature than bigoted. I doubt any HCP who definitely knew a patient had a severe allergic response to a drug or alcohol would want to induce an allergic response by giving the allergen to them. I find it difficult to believe we are taught to have negative feelings towards patients with allergies. But there may be something in this, even if only a new insight into myself, into the nature of how we perceive ourselves and others, that I can use to help me become a better person, doctor or teacher. Unconscious biases, and the potential harms they can cause, are well described [7, 8]. This may well be what is happening here. Some groups of HCPs may be inadequately educated about allergies [9], which may potentially lead to an unconscious bias.

The negative attitudes about allergies remind me of poor attitudes towards mental illness. If we cannot see it, many of us do not believe it. Yet, when something happens, the individual affected by the unseeable mental illness has to suffer the consequences of the lack of belief of HCPs in them or their family. Why do so many things require physical proof to be believed?

I have told many colleagues my story and they found it of interest, asking me more about unconscious biases and discussing where else we may exhibit biases, so as to make amends. They also asked or looked up the facts about clarifying penicillin allergies [10]. Most of all, I learned a valuable lesson that I wanted to share! It may even cause a reader to pause for a second themselves and incorporate new knowledge into their life and practice.

Compliance with ethical standards

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