

Graduation Address – Associate Professor Johanna Westbrook

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This is a very important day. You should all be sitting back feeling extremely proud of yourselves. You have achieved something that many Australians will never achieve or even dream of as a possibility. Only 10% of Australians have a bachelors degree and only 3% have a post-graduate qualification. You are part of an educational elite and the direction and prosperity of the health system is in your hands. The odd one or two among you may be thinking I don't know that much. Perhaps you have come to the same conclusion as many of us that the one thing education gives you is a realisation that the more you know the more you realise you don't know. However the skill you all have is that you have learnt how to learn. That's incredible powerful.

The one thing everyone graduating today has in common is an interest in information and communication. Communication is one of the fundamental things that make us human. The way we speak can reveal our gender, age, education, cultural background, country of origin and even our locality within a country. We often pride ourselves on the fact that within Australia we all speak the same way. Australian slang for example is pretty universal. Wherever you go other Australians would understand if you ask them to grab their cozzie, or to pick up the ankle biters from kindie. However, having perused some Australian slang dictionaries, I do detect some subtle state differences. Queensland seems to be the most unique in this aspect with such gems as "awning over the toy shop" which Queensland men use to refer to their beer bellies.

Those of you embarking on a career in speech pathology or in the area of hearing and speech will understand well the profound effects the loss of an ability to communicate can have on an individual's life and upon their relationships with others. From someone unable to speak following a stroke, to children whose stuttering leaves them with low self confidence and at increased risk of being bullied. These people will benefit enormously from your skills.

Communication between groups and organizations is just as crucial as it is for individuals. Poor communication can mean vital information is not passed on at the right time and in some cases this can have life or death consequences. It is here that health information managers come to the rescue by designing and managing large information systems to ensure that the right health information gets to the right place in time. This is not an easy task requiring high level analytical and management skills. We depend upon this information not just to treat individual patients, but to plan our health services.

As in all other sectors of the economy information technology is recognised as having the potential to improve communication for individuals and groups. At the Centre for Health Informatics, my own Centre, we undertake research to identify how and when IT might be a useful solution to people's problems.

This process often starts by gaining a detailed understanding of the ways in which health professionals communicate in practice. For example, we have been studying the communication patterns occurring in hospital emergency departments. For hours at a time we have research staff following around individual clinicians who are wearing microphones to recording all their conversations. We are interested in finding out who talks to whom and about what. Despite what you might believe from watching ER clinicians don't spend all their time resuscitating people, we have found that about 80% of doctors' and nurses' time is spent in communication. Around 10% of that time clinicians are involved in carrying out two or more conversations at once. Clinicians are interrupted on average 11 times per hour. You can see what the consequences of these type of communication patterns might be for patient care. Clinicians are at risk of forgetting tasks or making mistakes. We are now looking at what type of information technology solutions might help to improve these communication patterns.

Internationally it is now recognised that we need specialists who understand how to use information technology effectively within the health care system. Sydney University is the first University in Australia to offer a Master Degree in Health Informatics and today we are seeing the first graduates from that program.

In the mid 1990s, health informatics was a small satellite discipline, still largely technology focused, and outside mainstream health thinking. Two major initiatives have changed that dramatically.

The first is the drive for evidence based health care. It is now well accepted that health professionals must keep up to date with the latest research evidence in their disciplines if they are to provide effective health care. The major challenge however is the exponential growth in knowledge. For example, it is estimated that the average health professional would have to read tens or hundreds of articles a day in an effort to keep up to date. How do you feel about that! As a consequence, many now accept that the only way we can actually practice evidence based health care is to use information technology.

The second significant issue which has brought health informatics to the forefront is the focus on avoidable errors within the health system. All the evidence suggests that most errors arise from a complex set of interactions, and not from the isolated actions of individuals. Health professionals have always been poor at systems thinking, because the practice of health care has often been focused around the task of helping individual patients. Now we know that the best way to help patients is to think of the system within which we all practice. And again, informatics comes to the fore, because it is a systems science.

Thus while we have a growing body of specialists in health informatics, it is clear that all health professionals will require a greater understanding of informatics in the future. Consumers will also be affected.

Think about the last time you went to see a GP. Many of them would not have taken hand written notes, or used a prescription pad. Instead these have been replaced by a computer terminal. Some of you will have noticed that having a computer in the consulting room changes your interaction with your doctor. Studies have shown that when GPs use computers they tend to provide shorter responses to patients, delayed responses to patients questions, look less at their patient and miss comments that their patient makes.

It is for these type of reasons that many clinical information systems fail. It has nothing to do with the technical features of the systems. It is related to the fact that information systems result in changing the way health professionals do their work and changes the way they interact with people around them. We have to design systems that integrate well into health professionals' everyday working lives. That is the challenge.

Many of you here have experienced the thrill of participating in research. The excitement of posing an important question, coming up with a really good idea about how to investigate it, and watching as the results unfold during the analysis. Research is not just something for academics. All health professionals need to constantly evaluate what you are doing to be sure that it is making a positive difference.

For those of you who may still not be convinced that research can be fun I have the following example which may change your mind.

As most of you will know gifts of chocolates are common on hospital wards. Young health professionals particularly have a lot of exposure to a wide range and quantity of chocolates because they work very long hours and as we know chocolate has caffeine in it which is highly sought after by tired health professionals.

Research in Britain put health professionals to the test to actually determine whether this repeated exposure to chocolates made them experts in being able to identify individual chocolates. Most importantly, to see whether junior health professionals' skills in chocolate identification improved over time. In this study, published in the British Medical Journal, 76 randomly selected health professionals were shown a picture of chocolates and asked to identify the flavour and brand.

They found that health professionals' chocolate skills did increase with years of experience. However very senior doctors had the lowest chocolate scores. But while these senior specialists were not good at identifying the flavour of specific chocolates, they were able to provide labels such as "yucky one" or "yummy one". Nurses had the highest chocolate scores. What's that telling us? Interestingly, every group was equally good at identifying the coffee cremes. Do you know why? Because it is the most universally disliked chocolate.

The researchers concluded that the chocolate recognition score could be a useful management tool to measure time health professionals spend on the wards.

Thus no matter where you find yourselves working I guarantee that you will find some interesting research to undertake.

Finally I would ask the graduates to turn their attention to all the people sitting in the audience. It is this team of supporters that have helped you get here today. I imagine that many parents here will be experiencing flashbacks of your first day at kindergarten. The agonising concerns of parents, will Fatima ever learn to read, will David ever learn his times tables? I say to all those parents, you can now sit back and relax. They have made it. As I sit at home with my 6 year old trying to explain how to draw lines of symmetry through BOB the Builder I take great comfort in thinking that this is really just a small step in his education and that I too will one day be beaming with pride as you all are today.

Enjoy today - you have earned it. Thank you.