Nothing but a number

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A number, is a number, is a number, right? Not so say researchers Shamsher Singh and Beata Bajorek. They're developing a new diagnostic tool that will enable doctors to better define 'elderly' patients and to more accurately prescribe them medications.

In 1975, renowned sociologist and demographer Norman Ryder set out to answer the question, "At what age does someone become elderly?"

In his calculations he wanted to identify the age at which the average remaining lifespan was 10 years – leading him to conclude that people became elderly at the age of 65. Since then, this number has been adopted by the World Health Organization, and subsequently doctors, physicians and pharmacists, to understand and treat any person aged 65

and over.

Fast forward to 2015 where life expectancy has risen dramatically around the world. Thanks to improved health, nutrition, food supply and hygiene, Australians now have an average lifespan of 84.2 years. Given this upward trend of living longer, why are we still following an archaic health definition?

PhD candidate Shamsher Singh and his supervisor Associate Professor Beata Bajorek, from the Graduate School of Health's Discipline of Pharmacy, argue 65 is no longer an appropriate age to define elderly.

"You just have to walk through any hospital's aged care ward – no longer do you see people in their 60s, you see people in their 80s, 90s and 100 years plus," says Bajorek. "This definition needs to progress with the times and changes in the longevity of the population."

Besides the ambiguity of using this number as a reflection of today's life expectancy rates, the chronological age cut-off has many unfortunate implications, especially when providing access to much-needed medication.

"As soon as you turn 65, your GP's approach towards prescribing medicines changes," says Singh. "In some instances, this could mean your likelihood of receiving certain medication is reduced by as much as five times. Your age has a tremendous effect on pharmacotherapeutic decision making – it can be the sole influencer in deciding whether your doctor prescribes a medicine or not."

As a pharmacist by training, Bajorek describes this approach as incredibly frustrating. "To see older people missing out on really important medications based on their age goes against the grain of what we think should be a healthy ageing process, and limits our role as

pharmacists trying to facilitate the quality use of medicines."

To Bajorek and Singh, one's age might be a consideration when determining treatment, but not the deciding factor regarding one's access to medication. Rather, they argue it is the condition of a person's health, not their chronological age, that counts.

"In terms of medicine use, it just doesn't make any sense to base such an important decision on someone's age," says Singh. "Ageing is a highly individual and dynamic process that is impacted by one's own health status, activity level and other socio-environmental factors.

"My research is seeking to develop a tool flexible enough to identify patients' medicine eligibility based on other more important parameters such as cognition, function, biological age and physiological health status."

In order to develop this diagnostic tool, Bajorek and Singh have begun looking at clinical trials and guidelines that exclude patients based on their age, often those aged 65 years or over.

Says Bajorek, "There's a contradiction at work here. If you are testing a potential drug or device to manage a health condition usually experienced by the elderly, the findings from the trial data may be misrepresented since you are extrapolating results from healthy, young participants.

"Despite this, we see clinical trial evidence implemented into clinical guidelines, which are then applied into clinical practice today."

Health professionals making decisions based on these clinical guidelines are prescribing medicines to older patients who do not fit the clinical trial sample participant group, which can effectively mean decisions are

based on largely untested results.

Moreover, as this group are more likely to be taking a multitude of age-related medications, there is greater risk of medication misadventure.

Singh explains, "We plan to take age out of the equation and look for different influencers – for example, physiological characteristics of older people – to identify how patients respond to the medication.

"In our approach, we are not suggesting that older persons don't need special attention, we're just saying that you need to move away from using a number to determine their suitability for treatment."

Ultimately, the researchers aim to deliver a suite of resources to help clinicians make better decisions without using the actual age of a person as a key influence.

"In doing so," says Singh, "we will also develop some educational approaches to make people more aware about ageing itself.

"We hope our research will help contribute to a future that sees people being treated for their condition and not their age."

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