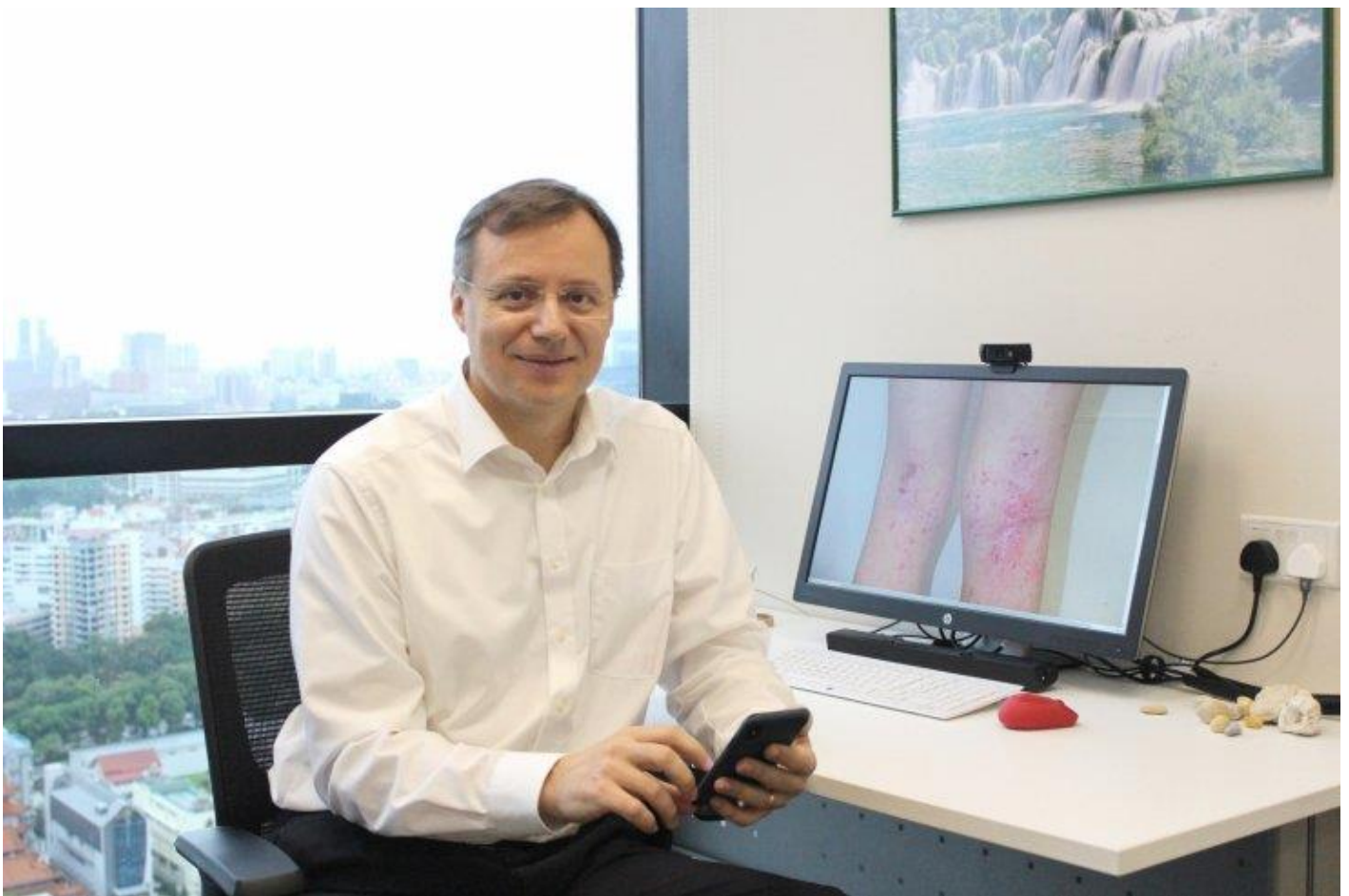


Science | Health

NTU research finds 34% of eczema Apps fail to meet global standards or guidelines

By *Bhaswati Guha Majumder*

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Associate Professor Josip Car from the Lee Kong Chian School of Medicine (LKC Medicine) [NTU website](#)

A recent study led by Nanyang Technological University (NTU) has found that almost 34 percent of eczema management mobile applications provide information that does not agree with international guidelines and mainstream therapies.

It should be noted that many of the apps studied feature information on available therapies and disease tracking function. But the team of researchers, led by Associate Professor Josip Car from the

Lee Kong Chian School of Medicine (LKC Medicine) at NTU Singapore, has detected a huge variation in the quality of apps available worldwide.

As per the study, these apps don't fulfil the complete set of criteria for educational information, tracking functions or health information principles, set out by the international eczema management recommendations such as UK's National Institute for Health and Care Excellence guidelines as well as the Guidelines for the Management of Atopic Dermatitis in Singapore.

The research findings highlighted the need for mechanisms and guidelines to ensure the quality of such applications and guide personalised app selection for patients, caregivers as well as doctors. As per the team, this is important for long-term conditions such as eczema, which is a term for several different types of skin swelling.

What's to know about eczema?

Symptoms:

- Dry, sensitive skin
- Red, inflamed skin
- Excessive itching
- Dark coloured patches of skin
- Rough, leathery or scaly patches of skin
- Areas of swelling
- Oozing or crusting

Treatment:

There is no cure for eczema but there are treatments. Depending on the age of the affected person and eczema severity, these treatments may include over-the-counter (OTC) remedies, prescription topical medications, phototherapy, immunosuppressants, and biologic drugs.

Associate Professor Josip Car, who chairs the Health Services and Outcomes Research Programme at NTU's LKC Medicine stated that the field of mobile health can lead patients towards better care and self-management of such skin diseases. He also mentioned that these apps have emerged as a novel approach to support the self-management conditions which is required in cases involving eczema.

Prof Car also added that this research has shown that "there is a large variance in the quality of eczema apps. While the assessed eczema self-management apps had shortcomings, certain apps did

provide appropriate functions with accurate information and comprehensive tracking of eczema-related factors."

As per Matthew Gass from the British Association of Dermatologists, it is important to research on these apps to test its accuracy and safety, as there are many similar apps available which would be inaccurate and unsafe.

For this study, NTU-led research team assessed 98 apps for eczema management that include 67 in English, 22 in Chinese and 9 in Spanish apps.

The team evaluated these apps using international eczema guidelines from Singapore, UK, US, China and Argentina to assess educational information related to eczema, especially tracking functions and compliance with health information principles.

In a news release, NTU stated that among these accessed apps, 84 percent provided educational information, 39 percent tracking functions and 13 percent showed both.

While among 38 apps with a tracking function, 82 percent measured specific symptoms, disease severity or current skin condition, 89 percent helped the users to record medication usage including application of topical treatments and 34 per cent recorded environmental or dietary allergens.

It should be noted that while 34 percent of apps providing information that was not in agreement with international guidelines, 15 percent showed information supported by international guidelines on pharmacological therapies as well as 16 per cent on non-pharmacological therapies. Even 11 per cent of the apps failed to mention mainstay therapies such as the use of emollients and moisturisers.

After this discovery, Prod Car said that "Perhaps the most useful way to address this issue would be to publish a list of recommended apps to aid clinicians in suggesting the appropriate options for eczema patients and caregivers."

This study was published in the *British Journal of Dermatology*, this week.

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