

# 2<sup>nd</sup> GLOBAL LIVER HEALTH FORUM

## DIGITAL TRENDS IN HEALTHCARE – THE POTENTIAL IMPACT ON NAFLD MANAGEMENT



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See the lecture

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## The digital world

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Advances in technology have resulted in changes in the way we all behave. In this modern era, access to technology has never been easier, causing a shift in the way people take ownership of their health. There are currently over 50,000 health apps available on app stores,<sup>1</sup> with that number growing year on year. Popular health/lifestyle apps have seen over 10 million downloads since their conception,<sup>2</sup> meaning the reach of these simple digital interventions should not be underestimated.

## Health apps specific to NAFLD management

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A relatively small number of NAFLD-specific apps are available on app stores; however, many of these are very basic and uninformative, providing a difficult user experience. The 'Love Your Liver' app stands out in this field, using basic gamification to educate people and potentially change lifestyle behaviors.<sup>3</sup>

## Other dieting and fitness apps

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Taking a broader look at dieting and fitness apps, a wide array of sophisticated options are available, including 'Lose it', 'Lifesum', and 'My Fitness Pal'.<sup>4-6</sup> Features such as nutritional education, recipe suggestions, and food databases to track calories are available on many of these apps. Some fitness app developers have also created communities on social media, which provide support and motivation for their members. Additionally, many new smartphones come with health monitoring devices pre-downloaded.

Although these applications are not liver-specific, their value to patients with NAFLD in terms of diet and lifestyle change far outweighs that of the NAFLD-specific applications. One study of patients with NAFLD receiving standard of care with or without utilising the 'nBuddy' mobile weight loss app found that patients who received standard of care and used 'nBuddy' had a five-fold higher likelihood of achieving  $\geq 5\%$  weight loss at 6 months post-baseline compared with patients who received standard of care alone ( $p=0.003$ ).<sup>7</sup>

## Wearable technology

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Wearable technology, such as smart watches, provide continuous health monitoring for patients. In addition to diet and fitness tracking, wearable devices can support diagnosis and regular observations, for example, ambulatory blood pressure monitors can take continuous blood pressure measurements.<sup>8,9</sup>



## How will digital trends impact clinical practice in the future?

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The development of advanced digital tools and devices means changes in the way healthcare is delivered are coming. Future monitoring advancements could include implantable devices such as microchips and smart household devices that connect to mobile applications. For example, biosensors connected to toilets and scales.<sup>10,11</sup> Data collected here can be sent directly to physicians who can check results and schedule check-ups if needed.

While face-to-face care cannot be eliminated, general health monitoring and consultations can also be carried out remotely. Patients will expect a seamless and personalised digital healthcare experience.

## Useful resources for keeping up-to-date with digital trends

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<https://futuretodayinstitute.com/trends/>

<https://www.mobihealthnews.com/>

<https://www.globalliver.org/resources#nash>

<https://easlcampus.eu/>

## References

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## Learning objectives:

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- Increase awareness of the mobile health apps available to assist patients with NAFLD management
- Understand which health apps may be most beneficial to patients with NAFLD and how
- Explore how digital interventions could impact clinical practice in the future

## Main takeaways:

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- NAFLD-specific health apps are available, which may assist in altering lifestyle behaviours in patients with NAFLD. However, their basic functionality and user experience means their usefulness to patients with NAFLD is limited
- Many non-liver specific health apps are available, which provide dietary and fitness monitoring and advice, resulting in weight loss and improved liver-related outcomes in patients with NAFLD
- Future advances in technology could see the introduction of continuous monitoring, remote diagnosis and a more digital healthcare experience for patients with NAFLD