

# A novel mobile-health platform improves weight-loss outcomes

## - follow-up for 6 months of individuals with obesity

**M.A. Larsen, R. Goll, J. Florholmen.**  
Research group of Gastroenterology and nutrition, Department of Clinical medicine  
UiT The Arctic University of Norway  
Corresponding authors email:  
doctorarlen@gmail.com

### Background

- Regular follow-up has shown to be important for successful long-term weight-loss.
- Mobile-health (m-health) platforms are new potential treatment tools for obesity.

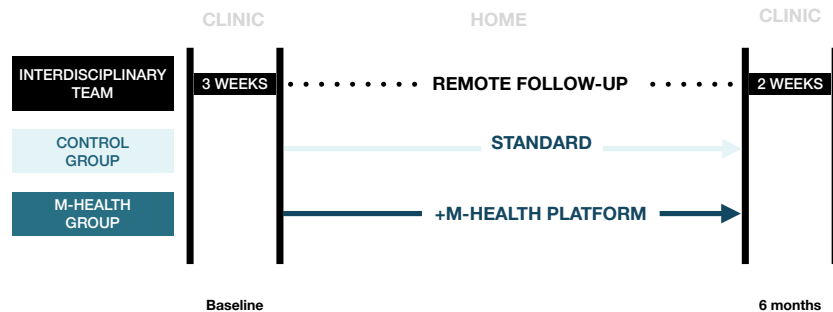
### Aim

The aim was to do a pilot-study to compare standard follow-up tools to m-health tools, after 6 months weight-loss treatment.



### Material and methods

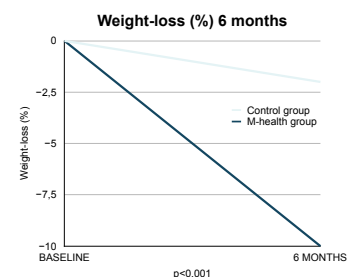
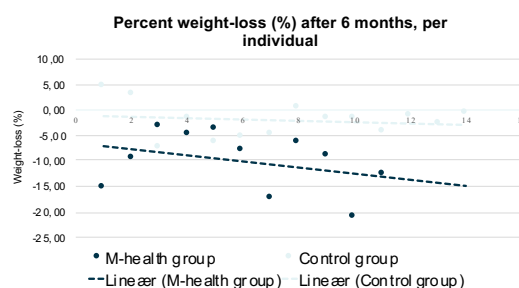
Over a period of two months, adults with obesity (n=27), was included from a specialist obesity clinic, "Skipton Health and Rehabilitation Clinic", Norway. The individuals were instructed to weigh themselves weekly, during follow-up, and to send updates about their lifestyle every second week to the interdisciplinary team. The m-health group used a novel m-health platform ("Lifeness"), while the control group used standard follow-up tools (telephone, email or SMS). Data was collected retrospectively for the control group, as they already had started treatment, and came for follow-up stay. Bodyweight at baseline, and at 6 months was collected at the clinic, and weight-loss in percent from baseline bodyweight was calculated. In addition, total activity in the m-health platform was registered, and experience from the m-health group collected by an online questionnaire after the treatment.



### Results

In the m-health group; two patients was lost in follow-up, as they quitted treatment. There was no significant difference in gender (male, M, or female, F) or age in between the m-health group (n=11, 9F/2M, 52±10yr) and the control group (n=14, 11F/3M, 47±13yr). The m-health group lost -12 kg ±7.2 kg (-10%±5.8%), and the control group lost -2.5 kg±3.7 kg (-2.0%±3.4%) after 6 months. The m-health group lost significantly more weight (-9.5 kg), and total percent weight-loss (-8.0%), after 6 months, than the control group. The m-health group were active on the m-health platform every 8<sup>th</sup> day in average. The m-health groups opinions about the m-health platform was: 100% would recommend it, 100% preferred it as a follow-up tool, 84.5% said it had a direct positive impact on their bodyweight, 87.5% said it had positive impact on their motivation, and 85.7% said that it improved the treatment. The m-health group reported the m-health platform to be easy to use (87.5%).

| Variable         | Control group (mean, SD) | M-health group (mean, SD) | Difference | P-value |
|------------------|--------------------------|---------------------------|------------|---------|
| Weight-loss (kg) | -2.5 ±3.7                | -12 ±7.2                  | -9.5       | <0.001  |
| Weight-loss (%)  | -2.0±3.4                 | -10±5.8                   | -8.0       | <0.001  |



### Conclusion

- Follow-up with the novel m-health platform gave 5 times more weight-loss (%) after 6 months than standard follow-up tools.
- The m-health group rated the platform to have a positive impact on their treatment, weight-loss and motivation.
- M-health can be a promising tool to improve follow-up and weight-loss outcomes in individuals with obesity, and more research is needed.

This study was founded by Forregion Oslo/Akershus, Norway Health Tech and Norwegian Research Council. M.A. Larsen has been involved in the development of the m-health platform, and is a founder.



UiT The Arctic University of Norway