Published in final edited form as:

Br J Sports Med. 2018 September ; 52(18): e4. doi:10.1136/bjsports-2017-098364.

Ride report: mobile app user guide

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NAME OF THE MOBILE APPLICATION

Ride Report.

CATEGORY OF THE MOBILE APPLICATION

Fitness.

PLATFORM

iOS (8.2 or later), Android (4.3 or later).

COST

Free.

ABOUT THE APP

Ride Report (<https://ride.report>) is a mobile app designed to automatically track bicycling and other transportation activity. Using specialised machine-learning algorithms that take advantage of smart-phone accelerometers, Ride Report automatically detects when users travel and identifies the transportation mode, whether it be bicycle, personal automobile ('drive') or transit (bus or train). Global positioning systems (GPS) is used to track the trip; at the end, Ride Report provides a notification of the trip completion, and gives the user an option to rate their route for bicycling comfort with a simple great/not-great rating from the lock screen.

The main page of the app lists each recorded bicycle ride, organised by day. Users can then click on a specific ride to see a map of the route taken, with data on caloric expenditure, duration and average speed (these metrics are currently iOS only). In addition to ride-

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Contributors: AKP drafted the article. MS reviewed the article several times and made substantial contributions.

Competing interests: AKP has nothing to disclose. MS is an employee of Knock Software, the developer of Ride Report.

Provenance and peer review: Not commissioned; externally peer reviewed.

specific details, users are provided with cumulative information on all trips recorded, such as total distance travelled by bicycle, kilograms of CO₂ saved and percentage of trips made by the tracked modes. Trophies are given as rewards associated with specific bicycle trip characteristics, such as weather ('blistering heat bonus'), ride frequency ('27 day ride streak') or time of day ('early bird worm'). Finally, a bicycling comfort map is provided within the app. If there is a sufficient number of rated trips in a given area, the map will colour-rate the streets from green (most comfort/great) to red (least comfort/not great).

The route-rating feature, in addition to street segment bicycle volumes, provides important data that can be used by city planners to identify where individuals ride a bicycle and how particular routes are perceived. The data collected by Ride Report could also be used for research purposes to provide detail about bicycling-specific physical activity, an activity that is poorly measured using more traditional activity monitors.¹ The focus on bicycling, including the features and breadth of data available, set Ride Report apart from other background activity monitoring apps.² Further, the methods used to detect movement allow for lower battery draw as compared with other tracking apps, which rely more exclusively on GPS.

USE IN CLINICAL PRACTICE

Evidence suggests that bicycling for transportation is associated with lower risk of morbidity and mortality,³ and is a feasible way for individuals to meet physical activity guidelines for aerobic activity.^{4–6} Because of the known benefits of active transportation, national prevention strategies have included transportation-specific physical activity recommendations.^{7,8} Ride Report can support individuals to be physically active in their daily life via bicycling and to participate in active transportation. Methods of encouragement within the app, including trophies, rewards and other metrics, are designed to provide motivation for continued bicycling. Further, access to the comfort maps in some cities may reduce barriers related to fear of traffic or stressful streets. Because the app tracks automatically, there is no learning curve or training involved, nor a need to remember to track activities. Ride Report is therefore a useful tool to introduce patients to the concept of activity tracking, with the hopes of increasing physical activity. Cities interested in utilising the data generated by Ride Report can encourage community members to download the app to take part in the active transportation planning processes (figure 1).

PROS

- ▶ No set up required to get started, and automatically logs ride without the user needing to start or stop the app, that is, a 'light touch' app that is useful for tracking data over time
- ▶ Provides information on time, distance and location travelled, as well as a comprehensive review of multiple bicycling-specific metrics
- ▶ Can connect to other apps within the smartphone and third-party platforms (ie, employer or other health and sustainable transportation incentives programmes)

- ▶ Gives in-app rewards for bicycling behaviour, designed to encourage continued bicycling—custom messages and monetary rewards can be sent to users based on bicycle behaviour
- ▶ Provides the opportunity for users to rate the trips they take on level of comfort, and then compiles that data to share with other users for route planning
- ▶ For city planning or research purposes, Ride Report's dashboard tool is available for purchase to query data based on specific trip or user attributes while maintaining user privacy and anonymity
- ▶ Allows users to share their achievements through email, text and social media.

CONS

- ▶ Does not currently log walking for transportation; the developers are working on adding this feature to the app
- ▶ A limited number of cities have data for a comfort map
- ▶ Unknown validity of the measures it provides, such as distance travelled or caloric expenditure
- ▶ No manual entry to add bicycle trips that may have been missed by the app or if the cyclist was not carrying their smartphone during a ride; however, riders can edit the mode of an activity that has been recorded, if inaccurate.

Acknowledgments

Funding: AKP is supported by a National Research Service Award postdoctoral research fellowship (T32-HL007055), funded by the National Institutes of Health (NIH) National Heart, Lung, and Blood Institute (NHLBI).

References

1. Herman Hansen B, Børtnes I, Hildebrand M, et al. Validity of the ActiGraph GT1M during walking and cycling. *J Sports Sci.* 2014; 32:510–6. [PubMed: 24117333]
2. Evenson KR, Furberg RD. Moves app: a digital diary to track physical activity and location. *Br J Sports Med.* 2017; 51:1169–70.
3. Celis-Morales CA, Lyall DM, Welsh P, et al. Association between active commuting and incident cardiovascular disease, cancer, and mortality: prospective cohort study. *BMJ.* 2017; 357:j1456. [PubMed: 28424154]
4. Chaix B, Kestens Y, Duncan S, et al. Active transportation and public transportation use to achieve physical activity recommendations? A combined GPS, accelerometer, and mobility survey study. *Int J Behav Nutr Phys Act.* 2014; 11:124. [PubMed: 25260793]
5. Sahlqvist S, Song Y, Ogilvie D. Is active travel associated with greater physical activity? The contribution of commuting and non-commuting active travel to total physical activity in adults. *Prev Med.* 2012; 55:206–11. [PubMed: 22796629]
6. World Health Organization. Global recommendations on physical activity for health. Geneva, Switzerland: World Health Organization; 2010. <http://www.ncbi.nlm.nih.gov/books/NBK305057/>
7. Physical Activity; Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/physical-activity/objectives> (accessed 22 Aug 2016)
8. National Prevention Strategy: Active Living. <http://www.surgeongeneral.gov/priorities/prevention/strategy/active-living.pdf> Published 2014. Updated May 2014. (accessed Aug 22 2016)

Figure 1.
Screenshot of Ride Report home screen.