



mHealth App Developer Economics 2015

The current status and trends of the mHealth app market

www.research2guidance.com

5th annual study on mHealth app publishing based on
5,000 plus respondents

November 2015

In partnership with

Telefonica

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Please feel free to share the report:



ABOUT RESEARCH2GUIDANCE:

research2guidance is a strategy advisory and market research company. We concentrate on the mobile app eco-system. We are convinced that mobile health solutions will make a difference in people's lives and that the impact on the healthcare industry will be significant. We provide insights to make it happen and to successfully lead your business.

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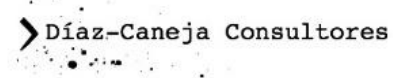
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1 SUMMARY

The mHealth App Developer Economics 2015 is the largest global study on the current status of mHealth app publishing and outlook of market trends in the next five years. This year more than 5,000 mHealth practitioners (this is how we call mHealth app developers, decision makers and others that have shared their experience in mHealth app publishing) representing almost 11,000 mHealth apps have participated. Compared to last year the number of participants more than doubled indicating the growing interest in mHealth app publishing. Thank you!

- The hype around mHealth solutions is still on with an increasing number of newcomers to the market. The mHealth market now embrace about 45,000 mHealth publishers. More than 3 bn mHealth apps will be downloaded in 2015 from major app stores.
- mHealth publishers are “growing up” in their company size as well as their “maturity” in involving medical professionals. The typical company has now up to 100 employees. The garage type of „ the owner develop themselves“ company decreased in relevance from 15% last year to 8% this year. The share of corporates with more than 5,000 employees increased from 13% to 17%. In addition almost all mHealth companies are partnering in one or the other way with a medical professional today.
- mHealth is a very unique market that differs significantly from other app categories in what companies want to get out of their engagement. 53% of mHealth publishers claim that their main motivation is to help others. They also follow economic goals but this altruistic thinking is unique in the app market.
- Despite the hype or maybe as a normal side effect, the majority of mHealth publishers claim that they did not reach their goals yet. This is obvious in terms of downloads or generated revenue which remained at the same unsatisfactory levels for most mHealth app publishers last year.
- Due to the difficulties in making money with mHealth, there is an inflation of business models mHealth app publishers are testing. More than 17 different business models are being used by today's market players.
- A few companies show that mHealth could financially work. 3% of mHealth publishers generate more than USD 1m with their mHealth app portfolio in 2014 using a significantly different market approach than the companies that make only little money.
- mHealth app categories preferences changed since last year with diagnostic apps offering the best business potential until 2020.
- Connecting the app to a sensor, to a third party API or using platform SDKs (Google Fit, Apple Health Kit) to automatically import the mHealth data is not commonly applied by the mHealth app publishers. Companies that concentrate on fitness apps are connecting the most, whereas the app entities of traditional health care companies are the most hesitant.
- mHealth app publishers today mostly target chronically ill people (48%) with their app portfolio. Since last year hospitals became more in the focus of mHealth app publishers as potential customers of their solutions (plus 4pp¹)
- Providers, such as doctors and nurses, are seen as the most threatened group by mHealth solutions in the industry. Especially doctor's business model is threatened through e.g. a reduction of double examination because of patient using EHR apps, less visits as patients use remote diagnostics solutions instead.

¹ Pp: percent points

- Follow up monitoring as part of the general treatment is seen by 60% of mHealth practitioners as the part of the patient/doctor engagement that mHealth apps will have the highest impact on during the next 5 years.
- mHealth apps promises to support behavior change. mHealth app publishers have a clear ranking on what works and what doesn't. Dashboards are the most implemented feature by today's mHealth app publishers (60%) followed by reminders (49%) and some kind of channel to a doctor (41%). Gamification in the way it is done today by most apps (e.g. badges, leaderboards) does not work for mHealth.
- App stores will remain the main distribution channel for mHealth apps until 2020. There is still a lot of hope in the market that eventually doctors and hospitals will become the dominant channel in the near future but this hope constantly decreased since 2010.


The mHealth Economics report is a summary of the data that is available from the mHealth Economics research program. It highlights the ongoing process of a new market that tries to integrate with the traditional healthcare market and that aggressively searches for models that support a viable business until the integration has materialized.

Enjoy reading. Feedback is highly welcome.

research2guidance

MORE FROM US:

MHEALTH APP MARKET SIZING 2015 -2020



Published:
November 2015
**Number of
pages:** 101

[SEE PREVIEW](#)

Data driven report which sizes the mHealth app market until 2020 and provides details for countries and business models.


Current mHealth app market sizing

- ✓ App categories market share
- ✓ Market revenues and downloads
- ✓ 17 mHealth business models
- ✓ Profiles of Top 10 mHealth countries
- ✓ Profiles of Top 20 mHealth publishers

mHealth app market forecast 2015 - 2020

- ✓ mHealth user development
- ✓ Market forecast by business model
- ✓ Connected device shipment and app downloads forecast

EU MHEALTH MARKET CONDITIONS BENCHMARKING 2015



Published:
June 2015
**Number of
pages:** 96

[SEE PREVIEW](#)

A comprehensive source of information about 28 EU countries and their market conditions for doing mHealth business.

Developers ranking

- ✓ Global and local practitioners view of market conditions
- ✓ Country drivers and barriers

Market readiness ranking

- ✓ Country comparison by 5 dimensions – eHealth adoption, market potential, etc
- ✓ Country comparison by 26 criteria

28 EU country profiles

2 ABOUT MHEALTH APP DEVELOPER ECONOMICS 2015

The mHealth App Developer Economics study is the largest global research program focusing on the mHealth app market. It is conducted for the 5th year by research2guidance uncovering the current status and the most important trends in the mHealth app market.

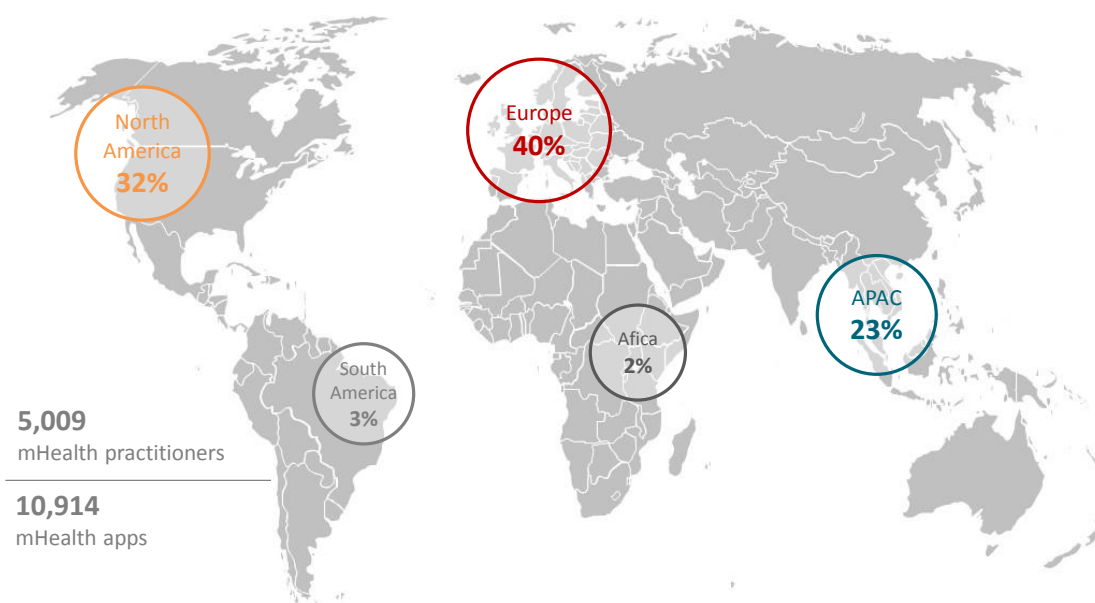
There has been a lot of hype around mHealth in the last years and the mHealth App Developer Economics study has seen an increased interest from mHealth practitioners as well. This year more than 5,000 respondents from all over the world participated in the survey, which more than doubled compared to last year. The majority of this year's mHealth Economic Research Program participants have or will have published at least one app that could be categorized as an mHealth app. In summary almost 11,000 mHealth apps have been published by the survey participants.

5th annual study on mHealth app publishing with more than 5,000 mHealth practitioners

EU and North America are still the main home countries of participants but the share of mHealth practitioners from Asia increased significantly since last year from 12% to 23%.

THE MHEALTH APP DEVELOPER ECONOMICS 2015 REPRESENTS THE GLOBAL MHEALTH APP MARKET

Share of survey participants by region



Copyright research2guidance 2015

Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

This report summarizes how mHealth app publishers and decision makers rate current market conditions, their own performance and future trends. In addition there are two other reports coming from the mHealth Economics Research Program that concentrate on mHealth business models and behaviour change which are available at www.mHealthEconomics.com.

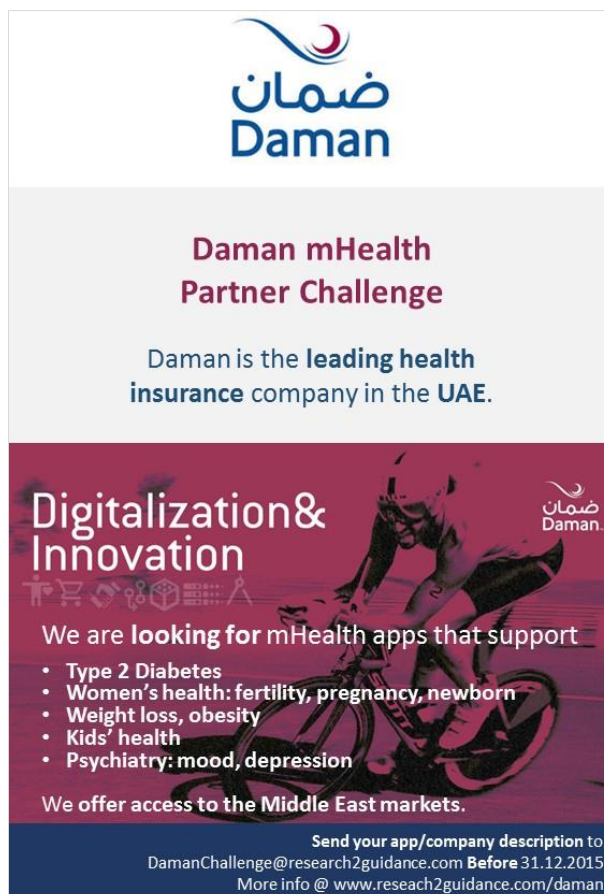
3 CURRENT STATUS OF THE mHEALTH APP MARKET: THE HYPE CONTINUES

Hype regarding mHealth apps remains. Both within the industry and in the media, noise continues to be made concerning new apps that can account for advances in technology (continuous glucose reading apps by Dexcom or MedTronic for example) or where spectacular company evaluations have been delivered (e.g. Under Armour's acquisition of MyFitnessPal for \$475m). Market leaders, Apple and Google too are complicit in this hype.

Like many other developments in technology, it appears that it will be users that establish the market and set the agenda. The promise of the market for both the individual, corporation and the state is great: mHealth apps and hardware could hold the key to improving the delivery of healthcare by making high-quality care increasingly accessible, whilst potentially reducing costs in delivery greatly.

The hype led to a growing number of new market entries and an increase in investments pouring into the market last year. Today there are 45,000 mHealth app publishers that have published at least one mHealth app into one of the major app stores.

FROM OUR RESEARCH PARTNER



The poster features the Daman logo at the top, which includes the Arabic word 'ضمان' and 'Daman'. Below the logo, the text reads 'Daman mHealth Partner Challenge'. A sub-headline states 'Daman is the leading health insurance company in the UAE.' The main body of the poster has a pink background with a cyclist. It says 'Digitalization & Innovation' and 'We are looking for mHealth apps that support' followed by a bulleted list: 'Type 2 Diabetes', 'Women's health: fertility, pregnancy, newborn', 'Weight loss, obesity', 'Kids' health', and 'Psychiatry: mood, depression'. It also mentions 'We offer access to the Middle East markets.' At the bottom, it provides contact information: 'Send your app/company description to DamanChallenge@research2guidance.com Before 31.12.2015' and 'More info @ www.research2guidance.com/daman'.

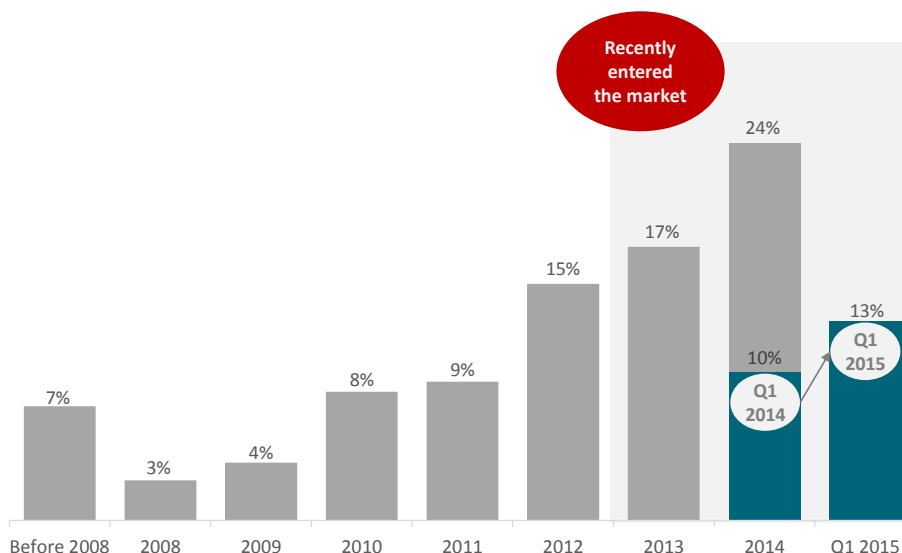
More than half of these app publishers have only recently entered the market. 13% of app publishers published their first mHealth app in the first quarter of 2015 which is 3 percent points more than in first quarter of 2014.

45,000 mHealth publishers today; most of them are new to the market

Since the launch of the Apple App Store in 2008, app stores have progressively expanded their app catalog in the Health&Fitness and Medical categories. mHealth now represents 5% of the total app market in terms of number of apps.

MORE THAN HALF OF MHEALTH APP PUBLISHERS ONLY RECENTLY ENTERED THE MARKET

When have you published your first mHealth app?



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Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

On the other hand overall market conditions have not changed since 2013. Traditional healthcare players, governances and regulatory bodies are still struggling to successfully enter the market or provide guidelines and market conditions that support mHealth companies².

The market is currently driven by innovative “start-up” like companies that have passed the phase of standalone information push solutions and concentrate on connected and integrated health services.

The other market drivers are patients/app users that increasingly download mHealth apps and start to integrate them into their daily routines for staying healthy or managing a disease.

As a result of the growing number of mHealth app publishers and continued activity of existing players the number of mHealth apps increased to more than 160,000 mHealth apps. A significant share of these apps are published on multiple platforms reducing the number of unique apps to 103,000.

Major app stores list more than 160,000 mHealth apps

Despite this growth mHealth apps still represent only around 5% of all published apps in the on Google Play, iTunes and Microsoft Phone store. In Amazon Shop and Blackberry World the share of mHealth is lower – around 3%.

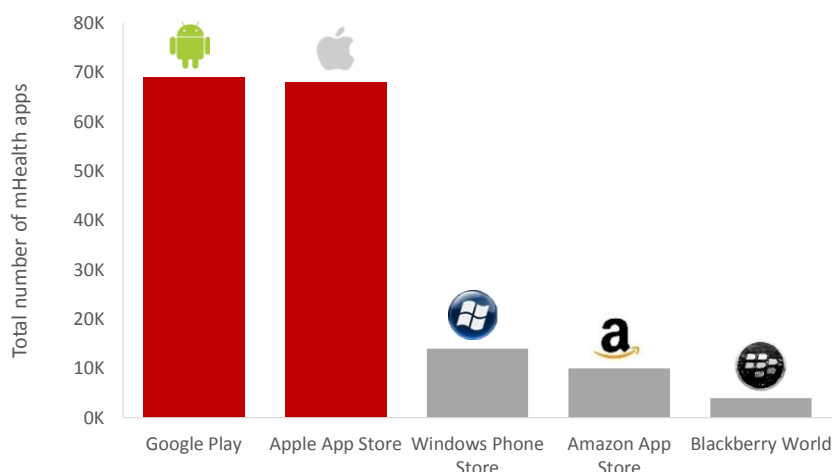
Most of the apps are published in Google Play or Apple App Store. Each of the two main app stores offer almost 70,000 apps within the categories Health&Fitness and Medical. .

² See also EU Countries' mHealth App Market Ranking 2015, www.mHealtheconomics.com

All other app platforms only play a minor role for mHealth app publishers today. On the Windows Phone store, there are almost 3 times less apps than in one of the two main app stores.

THE LEADING APP STORES OFFER THREE TIMES MORE MHEALTH APPS THAN OTHER APP STORES

Number of mHealth apps displayed in app stores



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Source: research2guidance, app stores (June 2015)

The health&fitness category includes slightly more apps (56%) compared to the medical category (44%) within the app stores. The main mHealth sub categories remained unchanged since last year, with fitness and medical reference apps being the largest groups. 12% of apps target one of the main chronic diseases. Within that group, apps that claim to help obesity management is the largest therapy field (29%) including the large section of weight loss apps, followed by diabetes (20%) and cancer (19%) apps³.

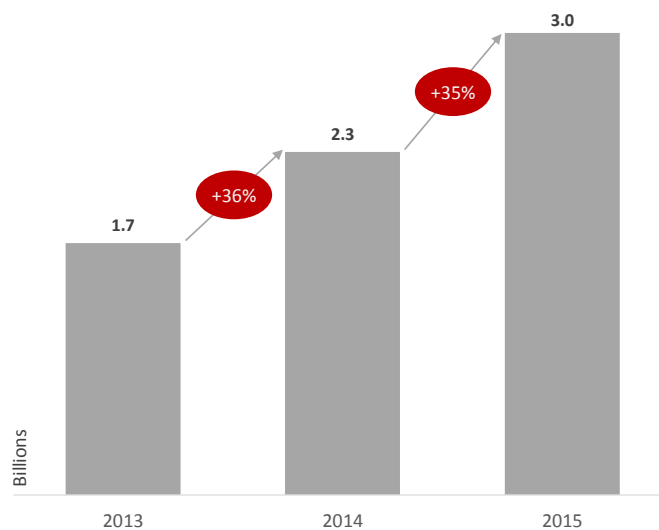
3 billion downloads of mHealth apps estimated in 2015

The increasing competition on the supply side (number of apps) is meeting an almost equally growing number of downloads (demand side). The interest in mHealth apps is still growing year over year. In 2015 more than 3 billion downloads of mHealth apps have been estimated for the main app stores. The growth might eventually slow down in the future because of smartphone penetration reaching saturation level and constant average download numbers per user per year but this won't happen soon.

³ US App Store data: Google Play and Apple App Store Dec. 2014

THE DEMAND FOR MHEALTH APPS IS INCREASING EVERY YEAR

Estimated total downloads of mHealth apps (billions)



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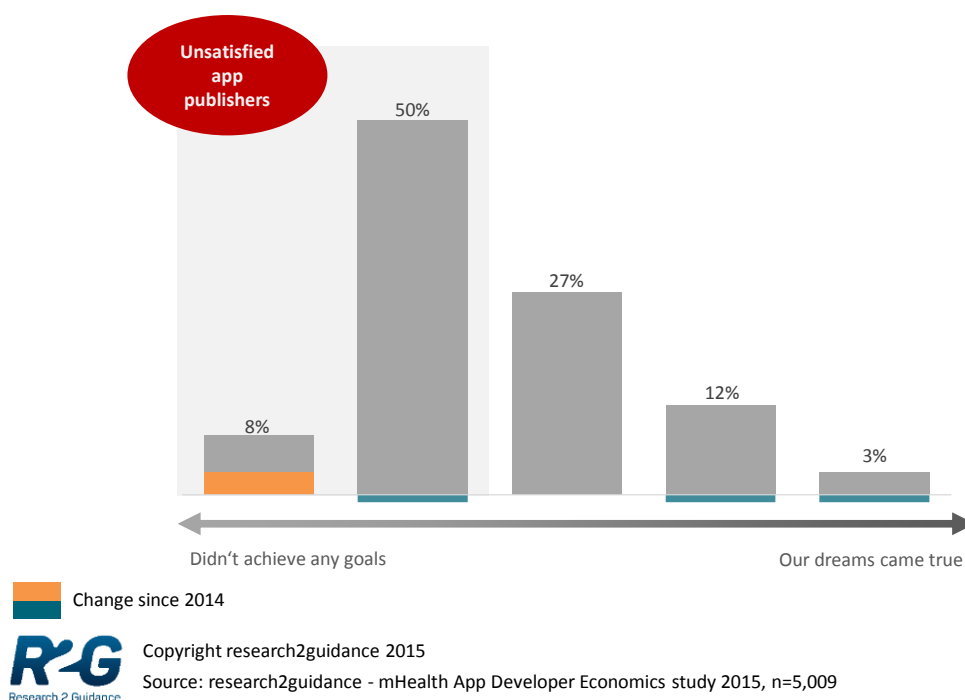
Source: research2guidance

4 THE REALITY: HOW DO MHEALTH APP PUBLISHER PERFORM?

Despite the growing increase in the demand side of the market, most of the companies involved in the market still report disappointing results and that they are not satisfied with what has been achieved so far. More than half (58%) stated to either not achieve any goals or only achieve them partly which represents a small increase (3 pp⁴) in the “unhappy” share compared to last year. On the other hand 15% of mHealth companies report that they have greatly achieved their goals.

ALMOST 60% OF APP PUBLISHERS ARE UNSATISFIED WITH ACHIEVING THEIR GOALS

To what extent have you achieved the goals you have with publishing mHealth apps so far?



The prerequisite for any mHealth business model is that the company reaches a sufficient number of downloads and users. Despite the growing number of total downloads of mHealth apps, the individual companies are not benefitting from this global trend. The growth of user demand seems to be offset by the growth of app supply and competition.

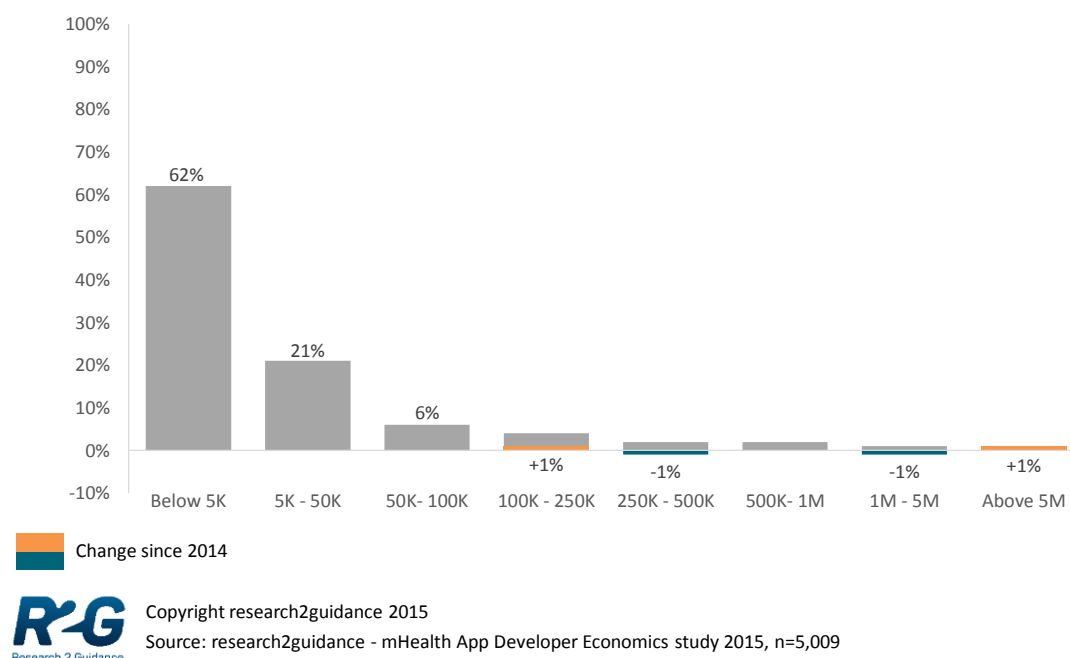
Growth in user demand is offset by the growth in competition

The app download distribution of mHealth companies hasn't significantly changed since last year. Still, the majority of app publishers haven't managed to get their apps discovered and downloaded. 62% of app publishers generated less than 5,000 downloads with their entire mHealth app portfolio. Only 11% of app publishers have reached more than 100,000 download and the chance to generate more than 1 million downloads in one year with an app portfolio is only 2%, similar to last year.

⁴ Pp: percent points

MAJORITY OF MHEALTH COMPANIES DON'T GENERATE SIGNIFICANT DOWNLOADS

How many downloads have all your mHealth apps generated last year (2014)?



Although there is a strong altruistic motivation in the mHealth market (see next chapter), a large share of companies want to generate additional revenue with their mHealth apps (44%) or use apps to sell existing products and services (39%).

Telefonica, leading the transformation of the healthcare industry



The healthcare landscape is facing major challenges as a result of demographic, social and economic changes. In Telefonica, we are helping to transform the healthcare industry by moving towards a more accessible and sustainable model using technology. Our e-Health strategy is focused on three areas:

- **Digital Hospital:** a suite of IT and communication services designed to improve the efficiency of healthcare providers, empowering professionals by providing access to the right information, in the right place and at the right time, and improving patient demand management.
- **Remote Patient Monitoring:** telemedicine services which optimize healthcare provision by adapting it to the needs and level of risk of each patient. This approach supports the development of a new care model which is more efficient and cost-effective, and ensures connection between patients, families and health professionals.
- **Self-care and Connected Care:** Self-care Programmes and well-being services that enable prevention, greater self-control and peace of mind by giving the whole population better access to doctors, health contents, and health self-monitoring. We have invested in a disruptive mHealth start-up which connects users and doctors online: *Saluspot*: the biggest Spanish speaking online community where users can engage with thousands of doctors and have online consultations.

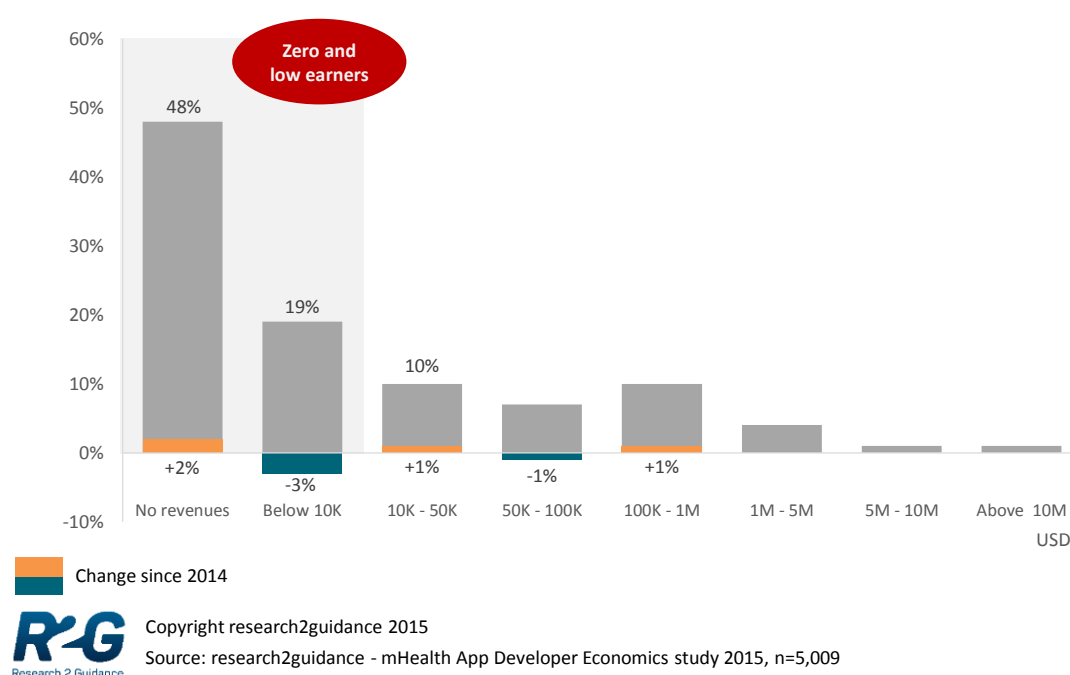
67% generated less than 10,000 USD with mHealth app last year

Despite the hype and largely because of the low discoverability and reach of the app portfolio of today's mHealth app publishers the vast majority of companies are not getting any significant financial return on their investment. 67% of mHealth app publishers have made less than 10,000 USD with their mHealth app engagement in 2014.

The financial situation of mHealth app publishers did not change since last year, and it shows that the economic break through has still not materialized.

MAJORITY OF COMPANIES ARE NOT GETTING ANY SIGNIFICANT FINANCIAL RETURN ON THEIR INVESTMENT

How much revenue did your organization generate with mHealth apps last year (2014)?



The high number of mHealth app publisher that report that their main revenue sources are not coming from product (e.g. app download, IAP) or service and device sales (e.g. remote monitoring and sensors) is also an indicator for the difficulties that companies are facing to survive on their original mHealth business model. For the 18% of mHealth companies that generated revenues in 2014, third party app development has been the number one revenue source.

In contrast traditional app store revenue streams like app downloads and IAP⁵, have only been the number one revenue source for 12% and 9% of mHealth app publishers last year.

The search for “how to make money” in mHealth has led to an inflation of different business models and revenue streams. There are more than 26 mHealth business models that are being used by mHealth app publishers today.

⁵ IAP: In App Purchase

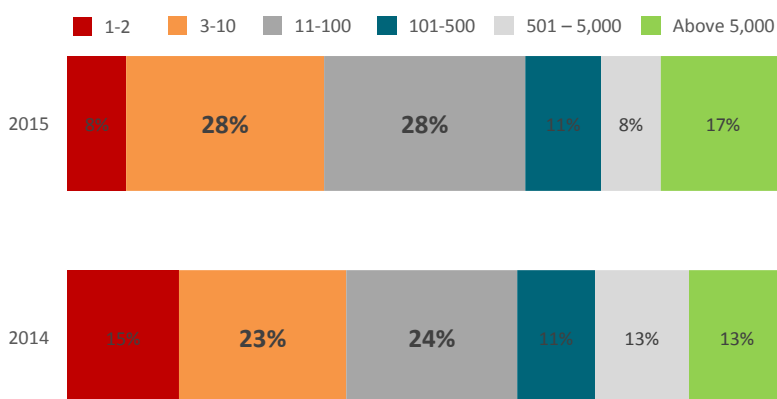
5 APP PUBLISHERS: WHO IS BEHIND THE HYPE?

*mHealth
companies
are getting
larger*

The companies that are behind the mHealth hype have grown up. It would not be appropriate anymore to say that the market is driven by small garage type of companies that are operated by the one or two founders. Only 8% of the mHealth app publishers fall into this category, which is a 7pp decline since last year. There is still a rather large group of companies that have a team count between 3 and 10 (28%) that could be labelled as garage companies but the majority of market players run their business with a larger team. 17% could even be rated as large corporations with more than 5,000 employees.

MAJORITY OF MHEALTH COMPANIES ARE NOT “GARAGES” ANY MORE

How many people does your company employ?



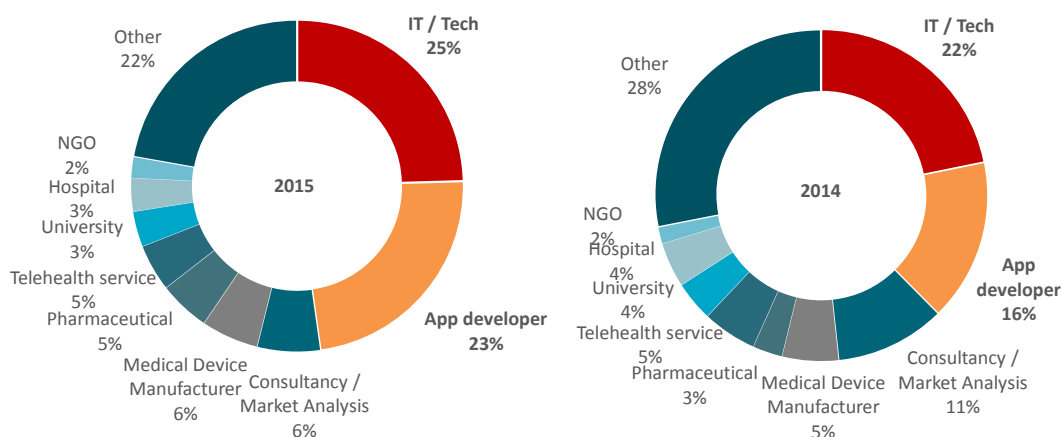
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Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

The background of today's mHealth app publishers is mainly technical and not medical. 48% are IT companies or classical app developers. As shown above they have enriched their team with medical competencies (see below) but are not coming from the traditional healthcare industry. Hospitals (5%), pharmaceutical (5%) and Med Tech companies (6%) are active in the mHealth app market but represent only minor app publisher groups.

THE MAJORITY OF MHEALTH APP PUBLISHERS HAVE AN IT OR TECH BACKGROUND

Your organization is best described as:



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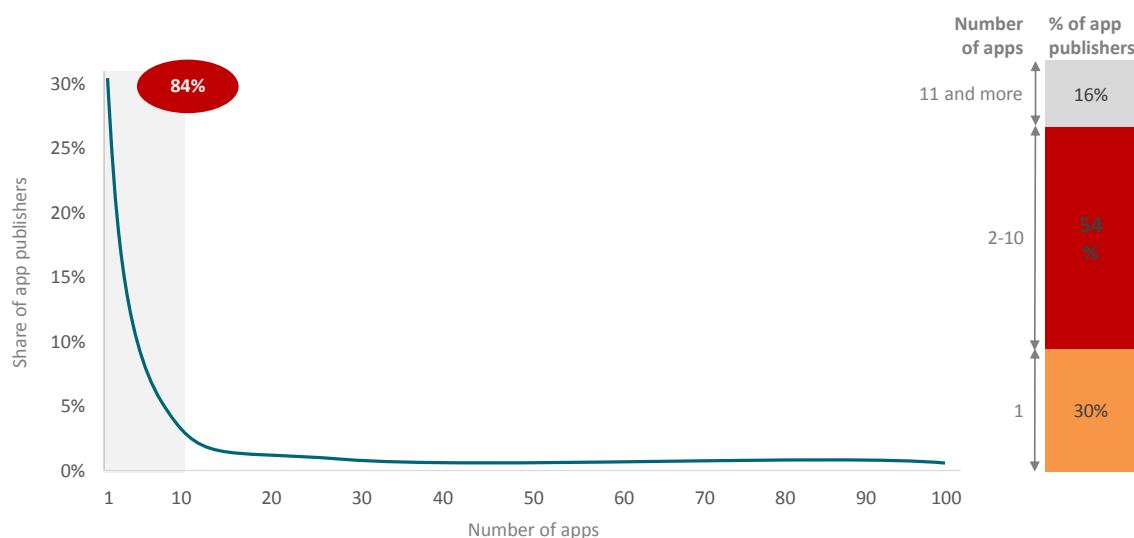
Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

30% are one mHealth app companies. The majority of companies (54%) count between 2 and 10 mHealth apps in their portfolio. 16% have more than 10 apps.

The relatively small mHealth app portfolios of today's mHealth app publishers also reflects the large number of newcomers in the market, which starts with one or two apps.

84% OF APP PUBLISHERS HAVE LESS THAN 10 APPS IN THEIR MHEALTH PORTFOLIO

How many mHealth apps has your company published so far?



Note: An app that is published on multiple platforms is counted as one app.



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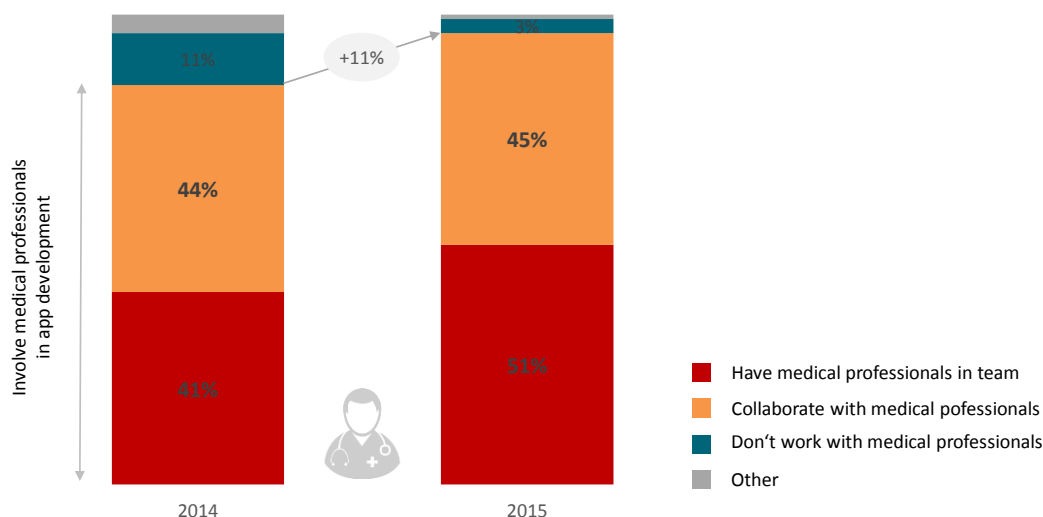
Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

What has changed since the last study's results were published is that the companies have secured some kind of medical competencies in their team. Today, 96% of app publishers consult with medical professionals – they either have them in their team (51%) or collaborate with them (45%). This indicator of medical competence has increased by 11 pp. It became mandatory to build and maintain mHealth apps with medical professionals as part of the team.

“Medical professionals are key to success!” – mHealth practitioner

IT BECAME MANDATORY TO HAVE MEDICAL PROFESSIONALS IN A TEAM

To what extent do medical professionals participate in the development of mHealth apps?



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Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

"We will improve our reputation if we show our tech skills are up to date" – mHealth practitioner

The motivation of mHealth publishers is different than that of other app developers. The main motivation for publishing mHealth apps is helping people with improving their health conditions (53%) and reducing costs or increasing efficiency of delivering health care (48%).

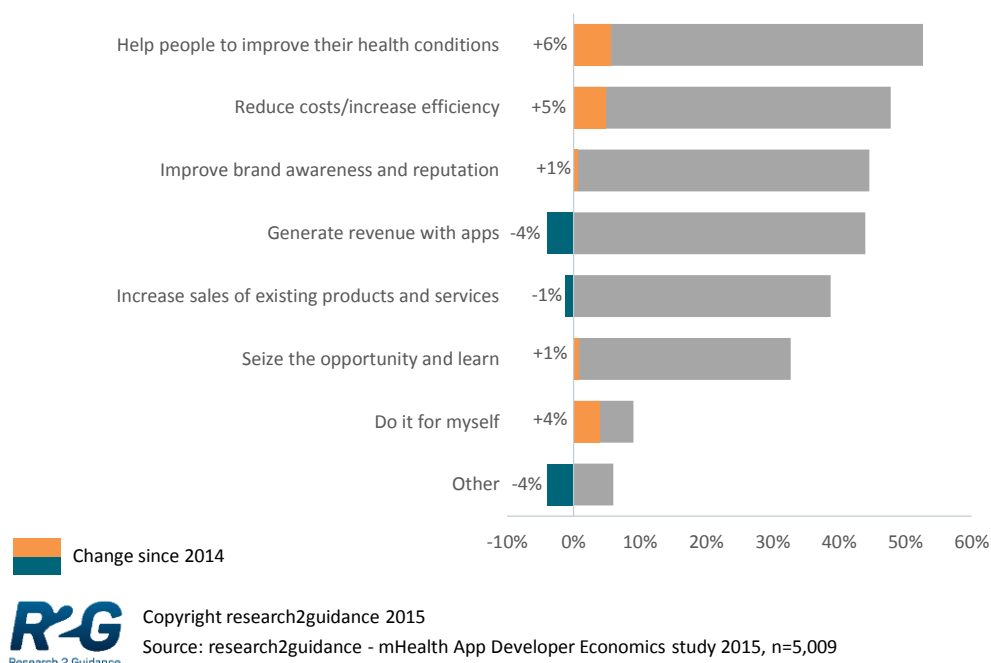
mHealth is a battle field for altruists

Besides that companies also want to make use of apps to improve brand reputation and awareness (45%) or to generate revenue (44%). Generating revenue is mainly more important for future app publishers and the share of publishers whose goal is to make money with apps has declined by 4pp since last year.

9% of app publishers have developed an app to help themselves manage their disease.

HELPING PEOPLE IS NOW THE STRONGEST MOTIVATION FOR PUBLISHING MHEALTH APPS

Which goals do you pursue when developing mHealth apps?



*mHealth app
publishers target
mainly chronically ill
people*

mHealth app publishers today mostly target chronically ill people (48%) with their app portfolio. This is not reflected in the current market share of apps that support chronic diseases but should change in the near future. The focus on chronic diseases is largely based on the high cost of treating those patients and the promise that apps could help reduce these costs by changing the behaviour of patients over a longer period of time. In most cases, this is still an unfulfilled promise, as most of the apps are failing to retain their users for even a few weeks. User retention is key for behaviour change and mHealth business models. For more information see chapter on behaviour change.

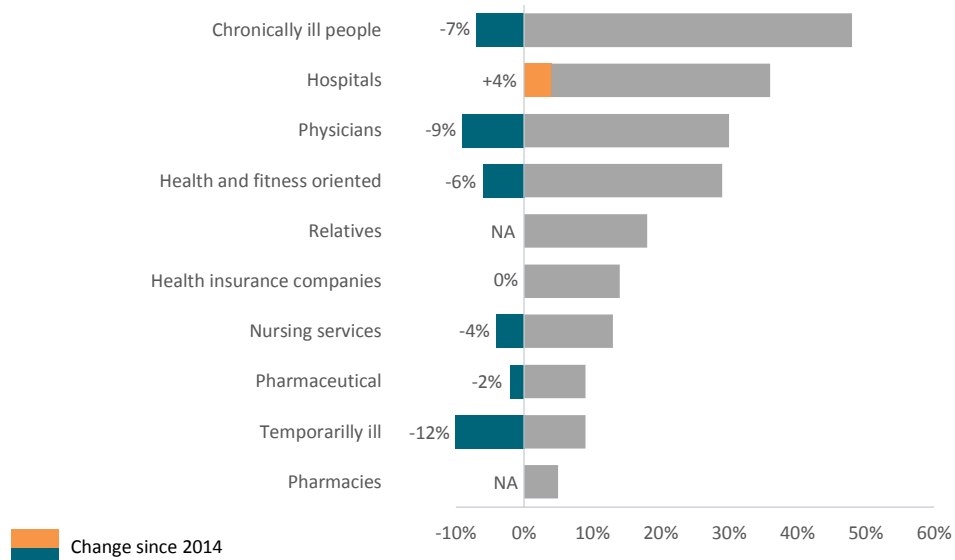
In contrast temporarily ill people are not seen as a main target group (10%). This target group even showed the largest drop in interest since the last study results were published.

Physicians are also facing a decline in the ranking of the primary target group of mHealth app developers (9 pp). There have been many reports on mHealth companies changing their go-to-market approach going away from selling in doctor channel back to a patient driven models.

In contrast, hospitals (32%) are more and more becoming the focus market for many mHealth app publishers. Fitness oriented people are the main target group of 29% of today's mHealth app publishers. Even though the fitness app segment is one of the largest sub categories in mHealth and the competition is already intense, it is the second most preferred target group for companies that plan to enter the market in the near future (42%).

CHRONICALLY ILL PEOPLE REMAIN THE MAIN TARGET GROUP FOR MHEALTH APP PUBLISHERS

What are the main user groups you target with your mHealth apps?



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Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

6 SUCCESSFUL APP PUBLISHERS: WHAT IS THE STRATEGY OF MILLIONAIRES?

Last year's mHealth App Developer Economics report introduced the concept of mHealth app "Millionaires" and analysed the different strategies of financially successful mHealth app publishers (more than 1m USD app revenue p.a.) and "Low Earners", companies with less than 10,000 USD turnover with their mHealth app portfolio in a year.

Differences between the two groups remained significant over the course of the last months.

71% of mHealth app millionaires come from the USA

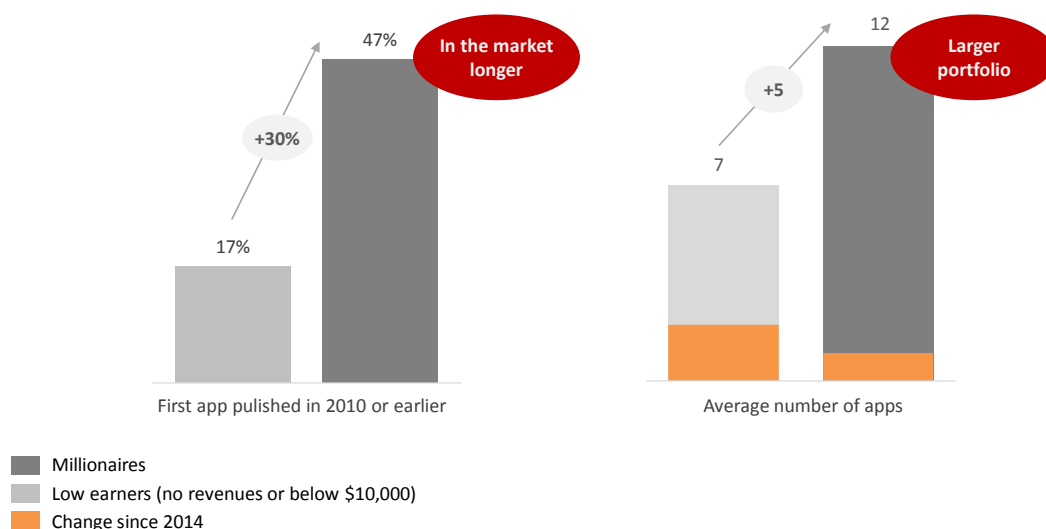
Experience pays off. "Millionaires" have more experience with publishing mHealth apps. They started earlier with app publishing, 47% of millionaires entered the market before 2010, which is 30pp more than those who earn less than \$10,000.

Both groups have grown their app portfolio, but there is still a significant difference in the size of the app portfolios. "Millionaires" publish 12 apps on average, which is 5 apps more than low earners.

It not a big surprise, but still worth mentioning, that the North American app market is producing more "Millionaires". 71% of millionaires come from North America whereas the share among "Low Earners" which originate in North America is 32%.

"MILLIONAIRES" HAVE MORE EXPERIENCE WITH PUBLISHING MHEALTH APPS

Share of app publishers that started before 2010 and average portfolio size



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Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

Objectives both groups pursue with mHealth app publishing still differ significantly. "Millionaires" publish mHealth apps to sell goods and services compared to "Low Earners" who are motivated by helping others.

"Millionaires" target more hospitals while "Low Earners" target the chronically ill.

“Millionaires” and “Low Earners” have similar goals such as generate revenue, improve brand awareness or reduce the costs of delivering healthcare. However, they differ in their top goal – which is increasing sales of existing services or products while for “Low Earners” it is helping people.

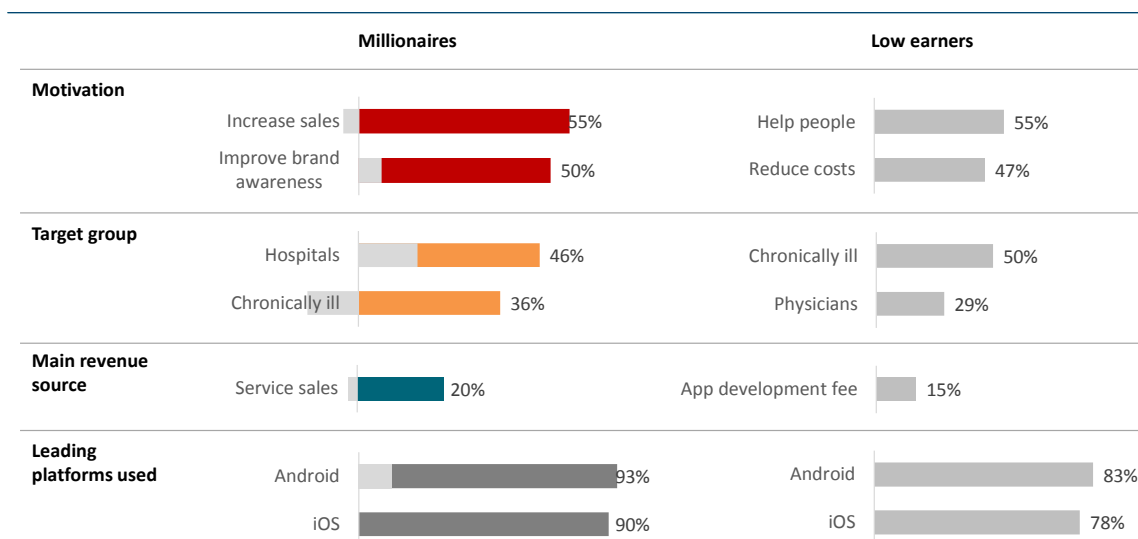
Financially successful mHealth app publishers concentrate more on hospitals as main target group, whereas “Low Earners” target private patients with a chronic disease.

“Millionaires” also managed to mainly rely on revenues from health services delivered through the app, as opposed to app development work that is the main revenue source for “Low Earners”.

Besides having a larger app portfolio, “Millionaires” keep developing apps for more platforms. On average, they develop apps on 3 platforms, whereas “Low Earners” just do 2.

MHEALTH APP “MILLIONAIRES” HAVE A SIGNIFICANTLY DIFFERENT MARKET APPROACH

Profiles of low earners and millionaires



Change since 2014 (Millionaires)

Low earners – revenue in 2014 less than \$10,000 or no revenue

Millionaires – revenue in 2014 higher than \$1,000,000



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Source: research2guidance - mHealth App Developer Economics study 2015, n=5,009

7 MHEALTH APP TOOL AND API USAGE

The launch of Apple Health Kit, Google Fit and the ongoing appearance of app and sensor APIs created a market environment that allows easy sharing of mHealth data between apps. This helps to potentially enrich the customer experience for apps within most mHealth app categories. Adding for example step counts by connecting to a third party app as an indicator for the activity level of the patient in an asthma app that focuses on symptom tracking improves the value of the app for the user and the doctors. App publishers are making more and more use of these APIs, asking their users which sensors or apps they want to connect their app to.

API service use is most common for fitness app companies

There are three main sources app publishers could stop by and get mHealth data.

- Direct APIs (e.g. MyFitnessPal, Runkeeper),
- Sensor APIs: APIs collecting data from sensors/wearables (e.g. Fitbit, iHealth)
- API/health data aggregators: One stop shop for health data from different apps and sensors (e.g. Apple HealthKit, Validic).

Currently, API aggregation services are the most common mHealth data access method. Fitness specialists (app publishers focused on fitness and nutrition apps) are by far the most advanced in connecting to APIs.

On the other hand, established healthcare players (e.g. hospitals, pharmaceutical companies) have the lowest API connection rate for their mHealth app portfolio.

FITNESS SPECIALISTS ARE FAR AHEAD IN CONNECTING TO APIs

Publisher groups' usage of APIs

| | Established healthcare players Hospitals, health insurance, pharma, Medtech | App specialists App developers, IT/Tech companies | Helpers mHealth publishers motivated by helping people | Fitness specialists mHealth publishers specialised on fitness and nutrition apps | Medical specialists mHealth publishers with medical team on board |
|---|--|--|---|---|--|
| Direct APIs (e.g. MyFitnessPal) | low | low | medium | high | medium |
| Sensor APIs (e.g. Fitbit) | medium | medium | medium | high | medium |
| Aggregation APIs (e.g. Apple HealthKit) | low | medium | medium | high | medium |

Low – below average usage
Medium – average usage
High – above average usage



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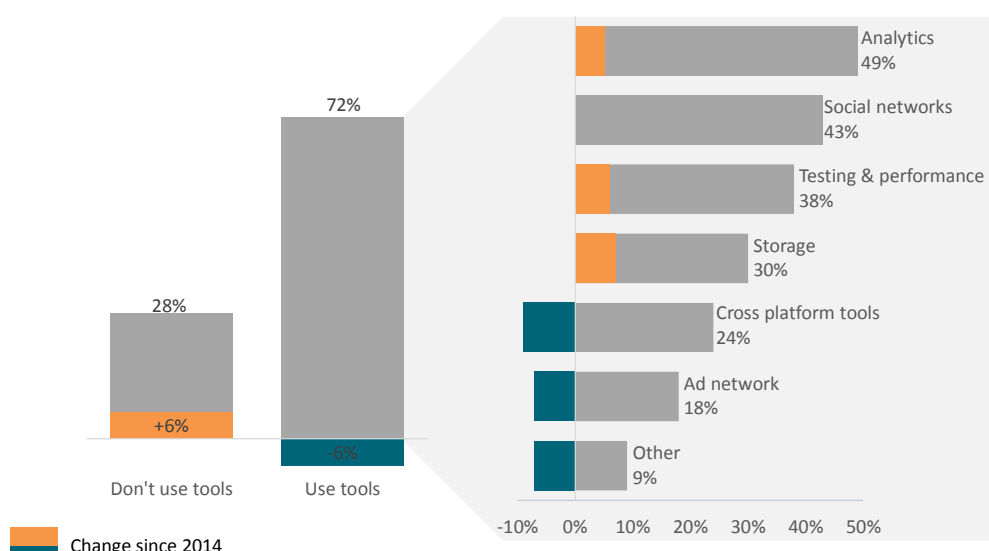
Secure health storage service usage raised most over the last 12 months

As “connecting” the app is key to increase the value for many mHealth app categories it is mandatory for all apps to make use of the app development and management tools available in the market. Still an increasing share of mHealth app publishers (28%) don’t make use of these tools. The reason might be the high number of newcomers to the market that are not aware of available tools or just have just started to launch the first versions without it.

App publishers that make use of tools, mainly use analytic tools e.g. Flurry, Distimo, Localytics (49%), social network APIs e.g. Facebook, Twitter (43%) and testing & performance tools e.g. Crashlytics, Testflight (38%). Since our last study, the share of mHealth app publishers using cross platform tools and ad networks have decreased while analytic tools and secure storage services have gained importance.

POPULARITY OF TOOLS SUCH AS ANALYTICS, TESTING&PERFORMANCE AND SECURE STORAGE HAS INCREASED SINCE 2014

Which tools/SDKs do you use within your mHealth apps?



Change since 2014

Note: At least one app in the company's portfolio



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8 BEHAVIOUR CHANGE: WHICH CONCEPTS WORK FOR MHEALTH?

One of the main promises of mHealth apps is that they help their users change their behaviour. The majority of mHealth apps today don't even come close to living up to this promise because they lose their users after a few days and thus have no chance to change any behaviour.

Dashboards are the most implemented feature to support behavior change (60%)

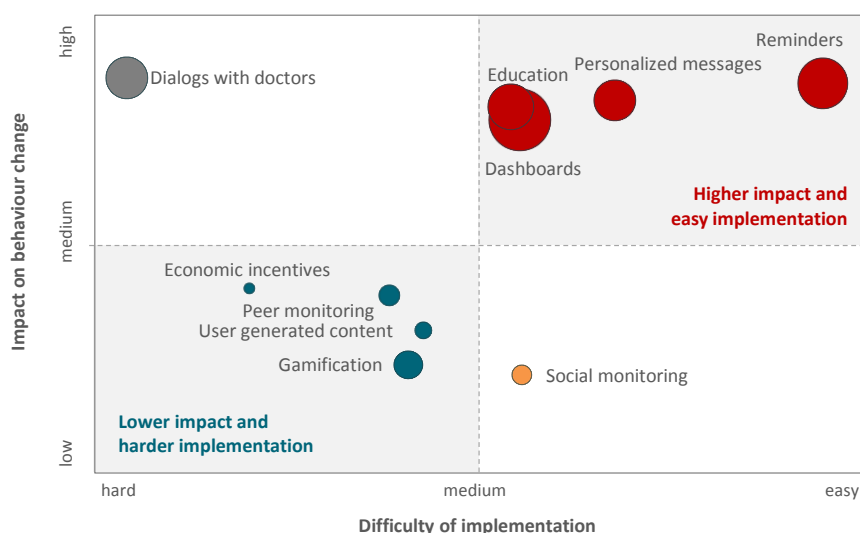
publishers make use of a variety of approaches that range from a simple reminder to a doctor commenting on the progress made. Dashboards are the most implemented feature by today's mHealth app publishers (60%) followed by reminders (49%).

In terms of impact on behaviour change and ease of implementation general reminders, personalized messages, educational content and dashboards are rated highest by today's mHealth app publishers.

Allowing the user to directly interact with doctors e.g. sharing weekly test results and allowing the doctor to provide feedback via the app, is seen as the approach that has the highest impact on behaviour change but is the most difficult to implement. 41% of mHealth app publishers claim to have implemented the doctor channel in some way.

REMINDERS ARE SEEN AS THE MOST EASILY IMPLEMENTED AND MOST EFFECTIVE IN CHANGING PATIENT BEHAVIOR

Impact and implementation of behavior changing app features



Note: Size of circle shows usage of the feature by app publishers



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According to mHealth publishers, gamification does not work for mHealth apps when it is done by simply transferring concepts like: badges, leader boards or challenges which have worked for other app categories. Gamification approaches have to be adopted to the mHealth target group to provide better support e.g. encouraging diabetes or stroke patient to do daily glucose testing or brain

exercises. It seems evident that, especially for kids, gamification approaches could have a major impact on changing behaviour or just compliance with a treatment plan. Currently, 28% of mHealth app publishers include gamification approaches into their apps.

Social monitoring, e.g. sharing blood pressure results on Facebook or other social networks, is something that might work in other app categories as well as for app promotion, but it has little impact on someone's attempt to cease smoking or lose weight according to mHealth publishers today. Therefore only 20% of mHealth app publishers are using it within their apps.

Offering financial incentives for habit changes is a widely discussed approach in the industry. Companies are using direct financial rewards, a reduction of deductibles within health plans or coupons redeemable into physical products or services. Incentives are being offered in return for providing e.g. daily feedback over a week, executing a step challenge or going to the gym 3 times a week in a month. mHealth app publishers perceive the impact that financial incentives have on behaviour change to be limited and difficult to be implemented. Therefore only 20% of mHealth app publishers are using financial incentives within their app portfolio.

Health insurance companies are well positioned to provide economic incentives in return for using behaviour changing apps. The majority are still hesitant, but first movers show how financial reward systems can be linked to an app. See "[mHealth Insurance App Benchmarking 2015](#)" report to learn best practices.

The main challenge for all of the mentioned approaches is to make the interaction as personal and relevant as possible, as health is one of the most private concerns, or as an mHealth practitioner puts it:

"Implementing something is easy, implementing it well - in a personalized manner - is the challenge" or "Gamification is on one level easy (leader boards, virtual trophies). On the other hand it is very difficult to create a truly immersive 'game' experience for patients".

9 THE IMPACT OF MHEALTH APPS ON HEALTHCARE

Despite the hype around mHealth and the millions of downloads and sensors shipments, mHealth has just started to change the way healthcare is delivered. Amongst all stakeholders in the healthcare industry, patients seems to be the ones that mHealth apps showed the strongest impact for today.

"It's the doctor - patient relationship that'll change the most." – mHealth practitioner

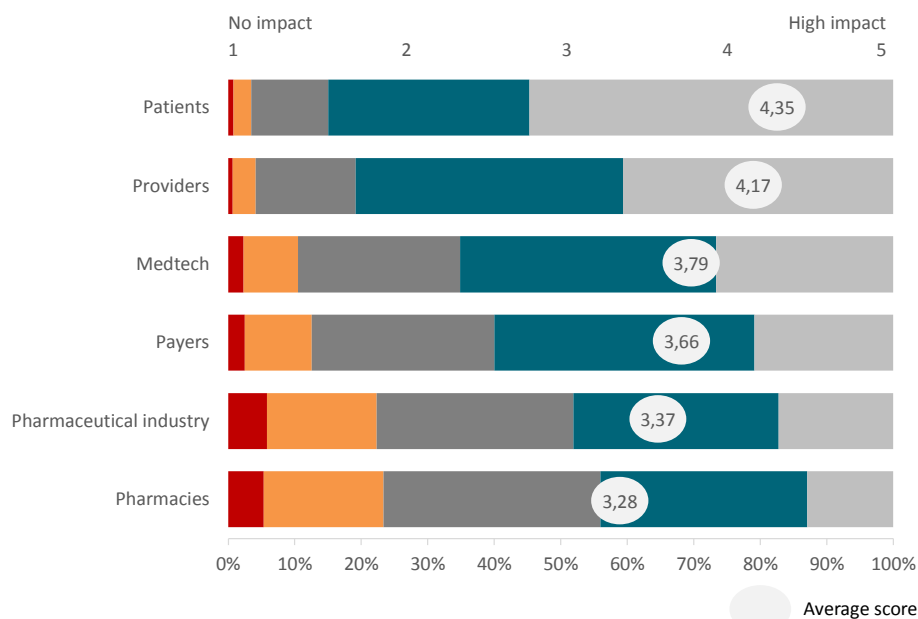
According to the mHealth market players, patients will remain the market group that will benefit the most from mHealth in the next five years. More than 50% of market players project a high positive impact on how patients manage their diseases and wellbeing. Providers, mainly doctors are seen as the second most impacted group in the healthcare industry. 41% of mHealth app publishers and decision makers foresee that mHealth will have a high impact on how they treat their patients, schedule appointments or execute diagnostics.

Other groups will be less impacted by mHealth during the next five years with pharmacies being the industry with the lowest share of high impact forecast. 23% of mHealth market players even anticipate that the impact mHealth will have on the Pharmacy industry will be none or very little.

Apart from Pharmacies, mHealth is foreseen to have a major impact on all other relevant healthcare stakeholders by the majority of today's mHealth market players.

PATIENTS AND PROVIDERS WILL BENEFIT THE MOST FROM MHEALTH

Which of the key healthcare stakeholders will be impacted most in the next 5 years?



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Providers, such as doctors and nurses, are also seen as the most threatened group by mHealth solutions in the industry. Reduction of double examination because of e.g. patients having their previous test results stored in their EHR apps, less visits as patients use remote diagnostics solutions instead amongst other user cases give a hint why the mHealth practitioners mainly see this group at risk.

"I believe that "going to a doctor" becomes rare in the future." – mHealth practitioner

Med Tech companies are also seen at risk as new technology always leads to new competitions, but in the case of mHealth there is great hope that solution cost will decrease dramatically in the next 5 years, thus threatening existing e.g. patient management or diagnostic system providers.

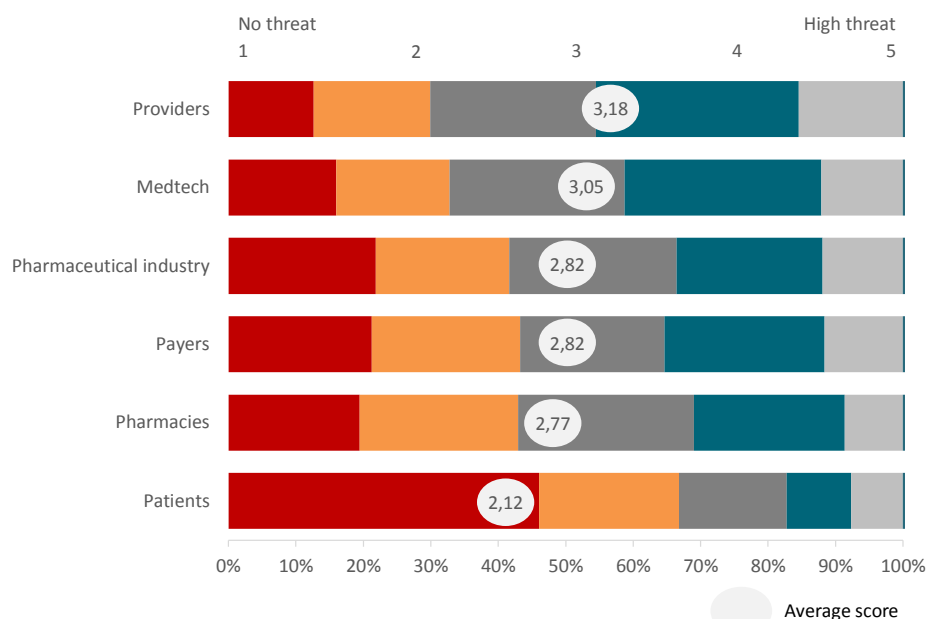
"Physician providers who embrace the technology will not be threatened." – mHealth practitioner

Pharma industry is seen to be at risk mainly because they will lose one of their key competitive advantages: knowledge about patients. New mHealth service provider already gather more patient information today with the help of app, that any of the Pharma companies' clinical trial are able to provide. Those mHealth providers will know e.g. how diabetes progresses for hundreds of thousands of patients in correlation with their activity level, what they have eaten, the mood they are in or the medication they have taken. Pharma companies already started to counter the risk but with limited success up to now. Read the "[Pharma App Benchmarking 2014](#)" report to learn about the mHealth app activities of the 12 leading Pharma companies.

Again patients are seen as the main profiteers of mHealth with only a few mHealth practitioners foreseeing a negative impact on patients in the next 5 years.

HEALTHCARE PROFESSIONALS ARE EXPECTED TO BE THE MOST THREATENED

For which of the traditional healthcare industries do mHealth apps represent the biggest threat to their core business in the next 5 years?



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As mHealth apps will impact patients the most, it will be interesting to see how the different phases of the normal patient journey will be impacted.

mHealth will impact follow up monitoring the most

Follow up monitoring as part of the general treatment is seen by 60% of mHealth practitioners as the part of the patient/doctor engagement that mHealth apps will have the highest impact on during the next 5 years. This is seen as the most promising way of integrating mHealth apps into the treatment of patients. This would even bypass the legal restrictions for remote consultation and monitoring being in place in some countries.

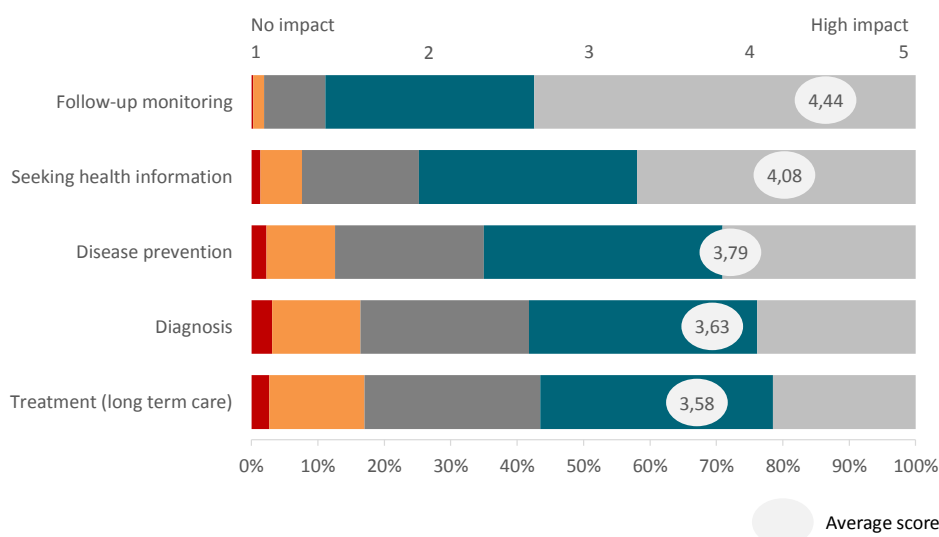
Patients seeking healthcare information using an app is seen as the second most impacted part of the customer journey by mHealth. This mostly refers to the ubiquity of healthcare information with apps granting access to e.g. disease, medication or doctor's information everywhere and every time.

Patients are expected to be the main profiteer of mHealth, and thus mHealth is seen to have a high impact on all other phases of the patient journey: prevention, diagnosis and treatment as well.

"Once you are diagnosed with a treatable and controllable illness, mHealth Apps will allow people to free themselves from physicians." – mHealth practitioner

FOLLOW-UP MONITORING WILL BE THE MOST INFLUENCED BY MHEALTH

Where along the "Patients' Journey" will mHealth apps/solutions have the biggest impact in the next 5 years?



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mHealth apps promise to significantly reduce healthcare costs once integrated into the healthcare system.

*“Until there is full integration into EHRs and medical reimbursement, it is unlikely that mHealth apps will make a measurable impact on healthcare costs.”
– mHealth practitioner*

The areas where efficiency gains are projected remained the same over the last year with basically two exceptions.

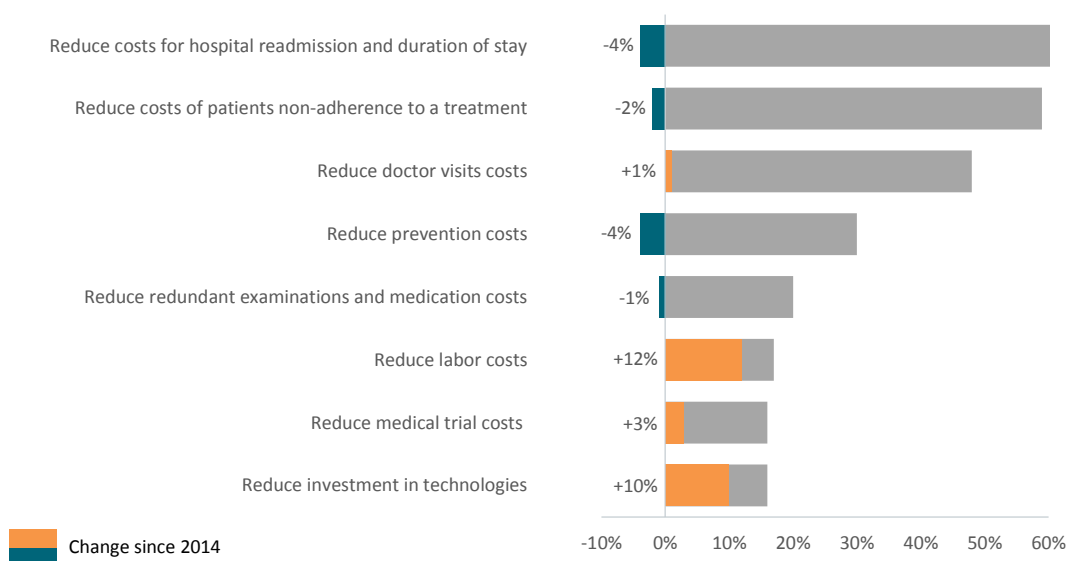
Compared to last year reduction of labour and technology due to mHealth got more attention from mHealth practitioners when rating the cost benefits of mHealth the next five years.

Hospitals readmission and length of stay costs remained the most promising cost saving areas for mHealth apps since many years, rated by 65% of mHealth practitioners.

Almost equally important in the next five years will be the reduction of non-adherence costs by simply pill reminder apps or apps that make the patients stick to a treatment through behavior change features (59%) according to mHealth practitioners.

MHEALTH WILL HAVE THE HIGHEST IMPACT ON REDUCING COSTS FOR READMISSION AND DURATION OF STAY IN HOSPITAL

On which cost drivers will mHealth have the highest positive impact in the next 5 years?



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10 MARKET TRENDS AND OUTLOOK

TARGET DEVICE PREFERENCE

The choice of device used for mHealth applications has broadened over the past years, but smartphones remain the number one target device for mHealth app publishers. Smartphones are also expected to remain the preferred device over the next five years and 85% of mHealth practitioners rate smartphones as a primary target device.

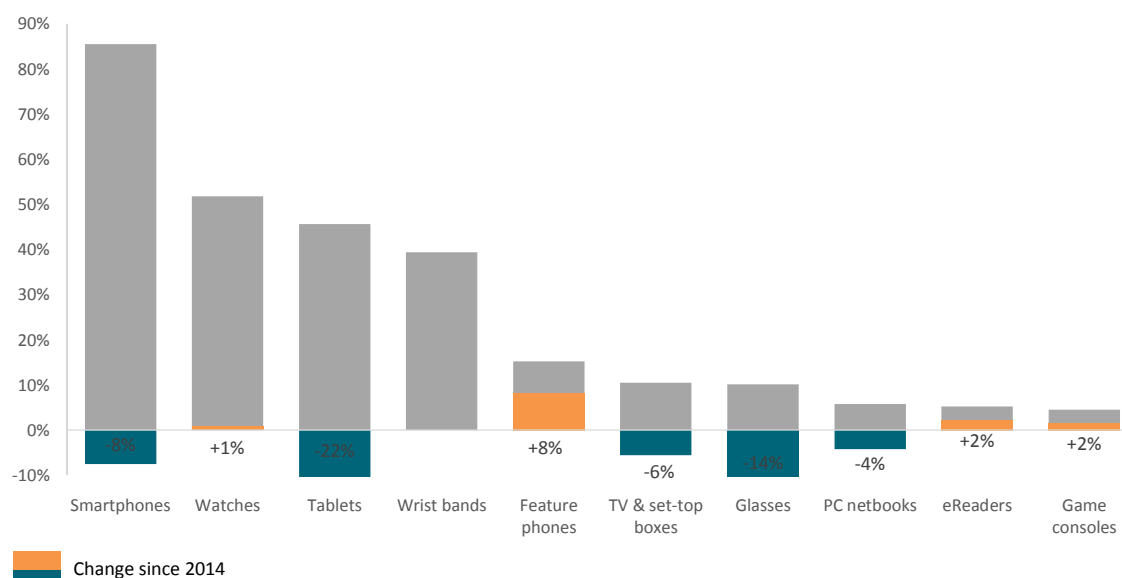
Watches replaced tablets as the second most important device for mHealth applications. Wristbands are ranked fourth in terms of the most important device for mHealth in the next five years.

All other devices play only a niche role in the device strategy of today's mHealth practitioners. This also applies for glasses, which even lost the highest share of mHealth practitioner preference over the last year.

Feature phones increased in mHealth practitioners ranking by 8pp since last year, which represents the biggest increase this year. It remains a niche device but highlights the potential for mHealth, seen especially in the developing countries with high feature phone penetration rates.

SMARTPHONES REMAIN THE MAIN PREFERRED DEVICE FOR MHEALTH APPS

Which devices will be the main target device for mHealth apps in 5 years?



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PLATFORM PREFERENCE

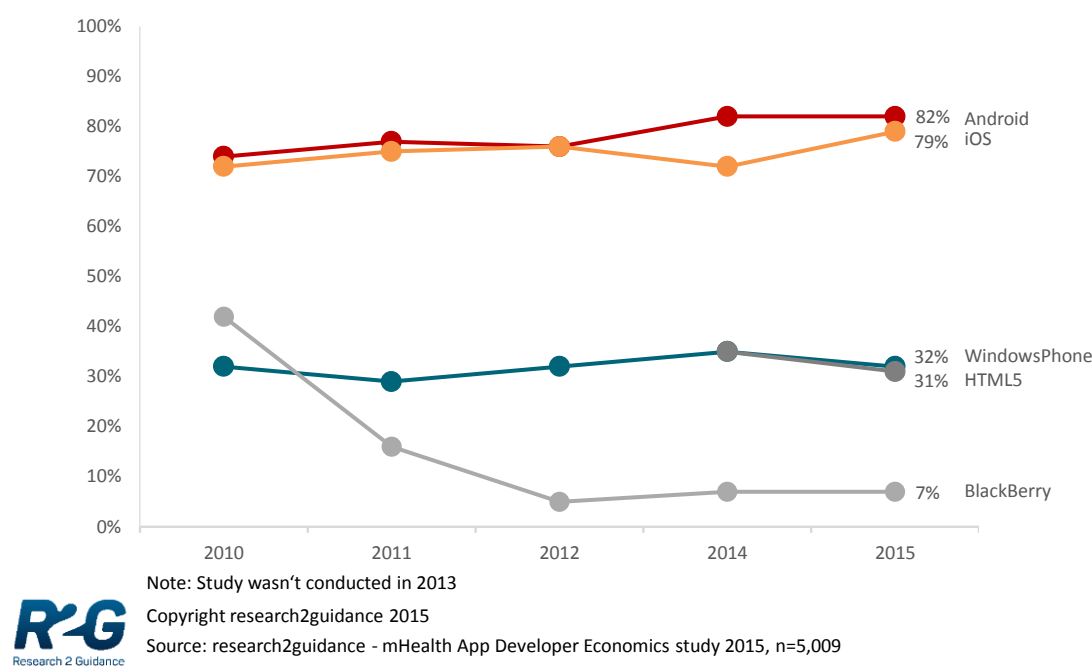
Android and iOS have remained the two dominant app development platforms for mHealth practitioners for many years now. There is no evidence that other platforms, like Windows Phone or HTML5, will close the gap in the developer's mindshare in the near future.

Other platforms, such as Tizen, Amazon Fire or Ubuntu, may get slightly more attention in the next years, however they will still remain minor platforms.

Blackberry seems to have already lost the battle, with only 7% of mHealth practitioners predicting that the former market leader in smartphones is the platform that offers the best business potential in the next five years.

ANDROID AND IOS WILL REMAIN THE LEADING SMARTPHONE PLATFORMS

What smartphone platforms offer the best market potential in the next 5 years?



SENSOR PREFERENCE

The automation of data input by the mHealth app user will be one of the main trends in the next years. Apps are already more and more connecting to sensors to feed their apps with activity, nutrition or biometric data.

There are seven main types of sensors that can be connect to an app.

According to 70% of mHealth practitioners built-in sensors to smartphones (e.g. accelerometer, heart rate measured with phone's camera) are the category with highest market potential, followed by wearable devices (53%).

The second most important sensor type in the next five years will be the ones that are implemented in a wearable device (e.g. wristbands, patches or chest belts) and that transmit the data wirelessly (e.g. Bluetooth) or via side loading (cable).

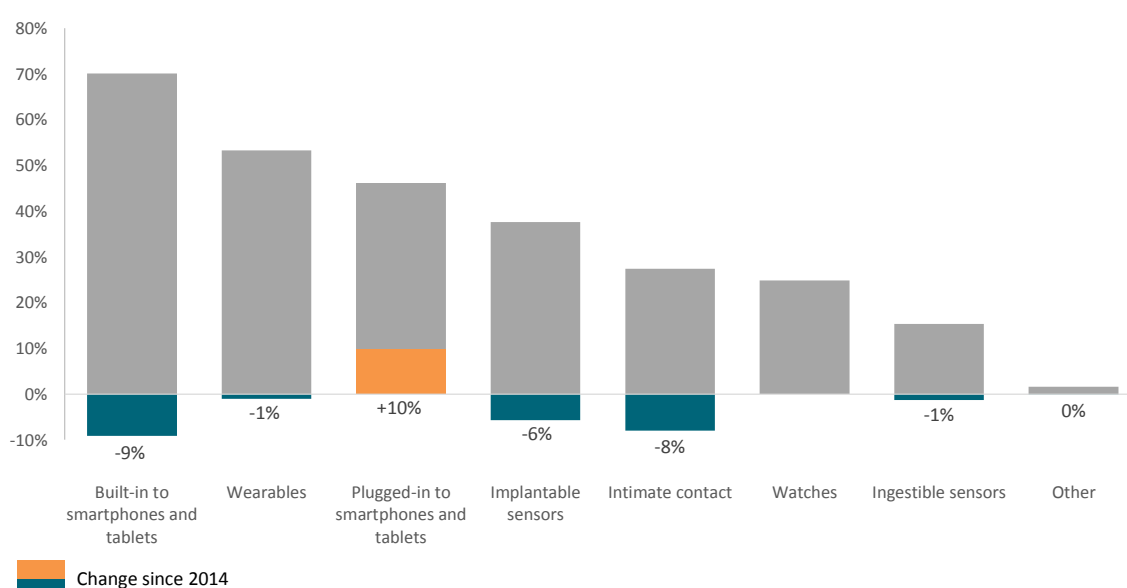
Sensors that can be directly plugged into the smartphone or tablet (e.g. thermometer, blood pressure monitor) have increased their business potential ranking for the next five years by 10pp since last year.

The future potential of sensors that are included in watches is rated high by only 25% of mHealth practitioners. The future importance of watches is more coming from the ability to display results rather than measuring the data.

The optimism about implantable (e.g. glucose detection for control of diabetes) and ingestible (e.g. camera pills) sensors and sensors that work with intimate contacts (e.g. eye lenses) have dropped since last year.

SENSORS BUILT-IN TO SMARTPHONES OFFER THE HIGHEST POTENTIAL FOR MHEALTH SOLUTIONS

Which sensor categories will be most relevant for mHealth app solutions in the next 5 years?



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THERAPY FIELD PREFERENCE

Patients with chronic conditions are the main target group for mHealth app publishers. Among the broad number of chronic conditions the business potential preference of mHealth app publishers hasn't changed in the last 5 years.

Since 2010 diabetes has constantly been considered the therapy field that offers the highest potential for mHealth. 70% of mHealth practitioners rate diabetes highest in terms of business potential for mHealth the next five years.

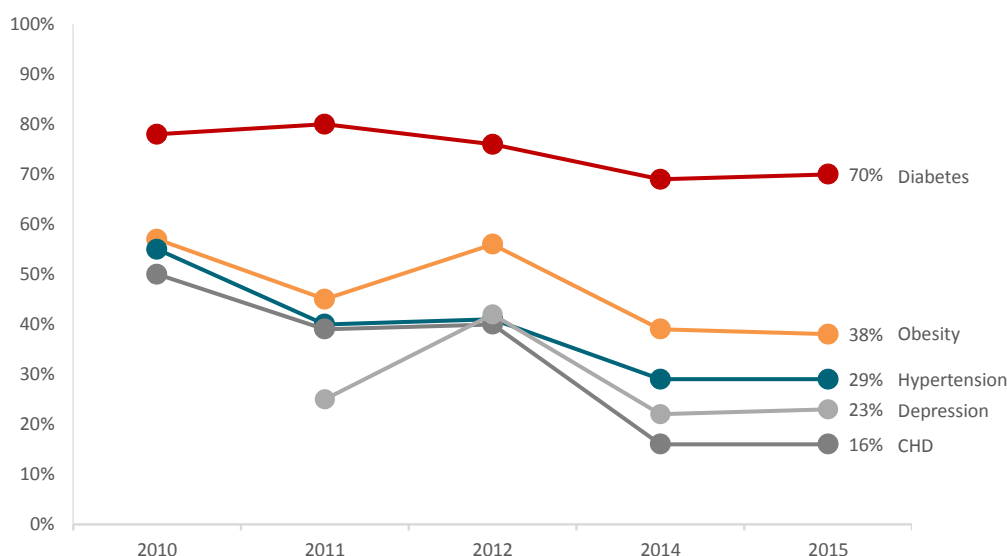
Obesity once (2012) came close to diabetes in business potential rating, but has dropped to 38%⁶ now. Hypertension (29%), depression (23%) and chronic heart diseases (16%) are consistently ranked on the third to fifth position.

⁶ 38% of mHealth app practitioners rate obesity as the chronic disease with the highest business potential for mHealth apps.

All other chronic diseases (not shown in the chart) will remain niche markets according to mHealth practitioners.

DIABETES REMAINS THE LEADING THERAPY FIELD FOR MHEALTH SOLUTIONS

Which therapy fields offer the best market potential for mHealth in the next 5 years?



Note: Study wasn't conducted in 2013

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APP CATEGORY PREFERENCE

The outlook on the business potential of the main mHealth app categories changed significantly since last year.

Diagnostic apps are now seen as the app category that offer the highest business potential in the next five years, overtaking remote monitoring apps, which dropped by 21pp in mHealth practitioners business potential rating since last year. Whether or not this might turn out to be a too optimistic view on the diagnostic capabilities of mHealth solutions in the near future remains to be seen, but it goes hand in hand with the foreseen threat of mHealth solutions to doctor's traditional business models. A large scale usage of trustworthy diagnostic solutions by patients would have an immediate impact on the number of doctor's visits and their business.

Medical condition management apps that effectively support patients and that go beyond simple tracking and monitoring is the app category that showed the biggest increase in business potential rating since last year.

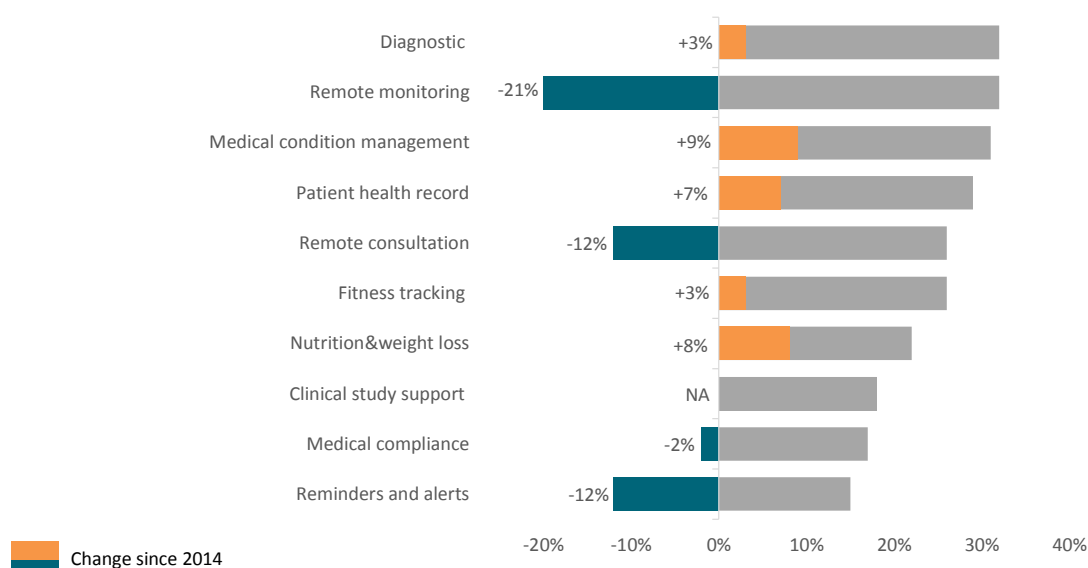
Electronic health records and nutrition apps have also made a significant climb in their business potential rating for the next five years.

"I think with the popularity of wearable devices the patients will take their health in their own hands and I could foresee that in the next 5 years a lot of self-diagnosis will happen." – mHealth practitioner

On the other hand, remote consultation and reminder apps, two of the “oldest” mHealth app sub-categories have dropped in their business potential rating by 12pp since last year.

DIAGNOSTIC APPS ARE NOW THE CATEGORY WITH THE HIGHEST BUSINESS POTENTIAL RATING FOR THE NEXT 5 YEARS

Which mHealth app categories will offer the highest market potential in the next 5 years?



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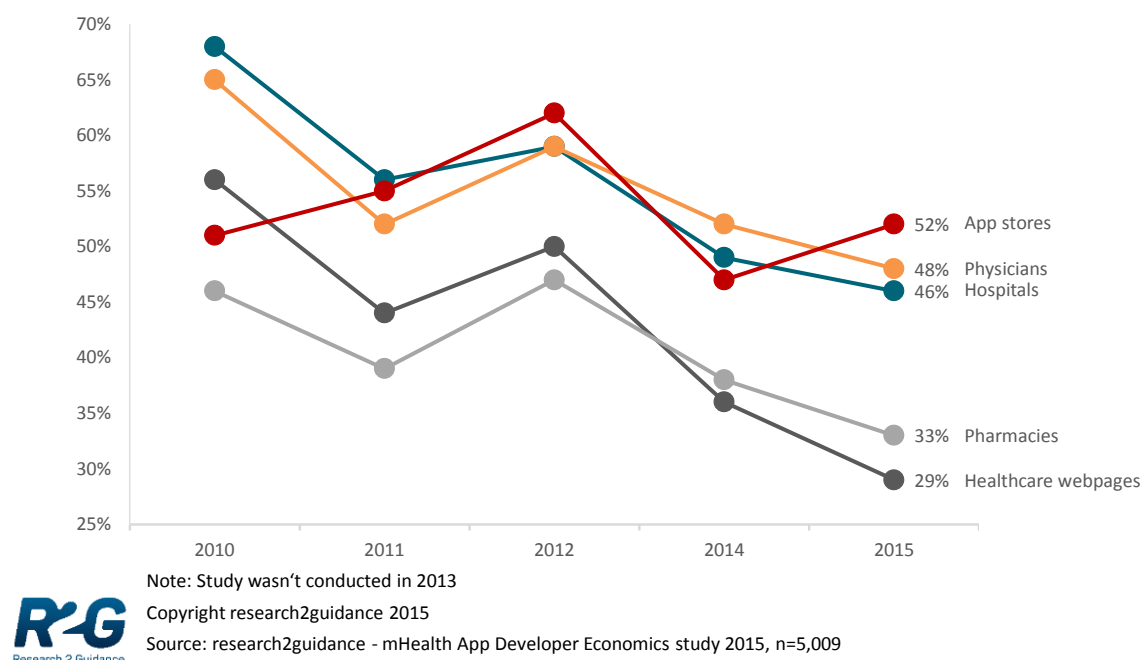
Distribution channel preference

App stores are back again as the number one distribution channel for mHealth apps. 52% of mHealth practitioners rate app stores, such as Apple App Store or Google Play, as the best channels to distribute mHealth apps in the next five years.

Other channels, such as doctors, hospital or pharmacies have been declining in their rating since 2010. In 2010, more than 65% of mHealth practitioners believed that hospitals or physicians will become the main distribution channel in the near future. That value has dropped to 48% (physicians) and 46% (hospitals) in 2015. In the early days there was optimism that mHealth apps will soon become an integral part of healthcare, which led to the assumption that doctors and hospitals will start including mHealth apps into their treatments and thus becoming the main distribution channel for mHealth apps. This scenario has not materialized yet, which led to a more realistic judgement of the impact these channels will have on the distribution of mHealth apps up until 2020.

APP STORES ARE BACK TO BEING THE NUMBER ONE DISTRIBUTION CHANNEL FOR MHEALTH APPS UNTIL 2020

Which distribution channels offer the best market potential in the next 5 years?



The hype around mHealth apps is still big. Doctors are still seen as key for the overall market success or as one mHealth publisher puts it:

"The market requires consumers. Apps are more likely to be adopted and more credible if consumers are encouraged by healthcare professionals"

The readiness of doctors to integrate mHealth solutions into their daily routines is low in most countries today. mHealth publishers that want to sell through doctor channels will have to identify the countries with more favourable market conditions, otherwise they will lose a lot of time and money trying to break the ice with little chances to succeed in the next two to three years.

Read the "[EU mHealth Market Conditions Benchmarking 2015](#)" report to find out more about the mHealth app market readiness in the 28 EU countries and to select the right country for your mHealth service.

The mHealth market is still in the hype phase and mainly technology and patients' driven. Healthcare integration has to take place before mHealth promises can materialize. Doctors are key to make it happen. Let's wait for this.

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