The Promises and Perils of Data – a Marketing Perspective

Breakfast Briefing 4th March 2016
Presenter: Dr. Nicole Gross (Change Team)
Starting Point

• Deep analysis of Connected Health hype

• Identifying how promises shape the market and practices

• Identifying how perils limit marketing potential
Patents filed worldwide

- Wearable technology
- Implantable sensor
- Wearable sensor
- Wearable device
- eHealth
- Mobile health
- Mhealth
- Telecare
- Digital health
- Connected Health
Experiential value

…and our device also gives data…
Data in Connected Health
Levels of Data

- **Macro** – societal level, countries, governments, EU level, WHO, diseases, large platforms, regulators
- **Meso** – selected patient/user-groups, hospitals, clinical/specialist groups, connected but standalone devices/apps/platforms, EHRs
- **Micro** – user habits and behaviours, patient experiences and journals, individual healthcare providers, rare diseases, specialized medicine, non-connected trackers and sensors, ethnography
Turning data to $
How do you see Data?

- Qualitative or quantitative variables?
- Individual pieces of information?
- Your customer value proposition?
- By-products or nuggets of wisdom?
- Something for future processing?
• **Data** - pieces that are collected and analysed to create information (least abstract)

• **Information** – communication, constraints, form, stimulus, instruction, meaning, patterns, perceptions and representation

• **Knowledge** – extensive amounts of experience about dealing with information on a subject

• **Wisdom** – combining knowledge with circumstance and context to make ‘good use’ (most abstract)

Data is not Wisdom!
Promises and Perils

So many possibilities because of data....

...but: data could also hinder the adoption of connected health significantly.
What are the promises?

- Comprehensive and compounded insights
- Life-logging (24X7 stream of data)
- Self-awareness and self-management, emancipate and empower the patient
- Personalized healthcare
- Focus on wellness rather than sickness / prevention
- Predictive analytics
- Clinical decision support and intelligence
- Enhanced communication between players (incl. patients)
The researchers found that about 19% of U.S. adults have downloaded and regularly use a mobile health app (Goth, *Health Data Management* Report, 2014).

- 18% have downloaded calorie-counting apps, of which 6% use them routinely;
- 16% have downloaded healthy recipe apps, of which 8% use them routinely; and
- 13% have downloaded food and exercise diary apps, of which 5% use them routinely (Gallup, *Health Data Management* Report, 2014).

What are the promises?

- Averse event avoidance
- Disease management (all levels)
- Effective treatment regimes and care planning (all levels)
- Quality enhancement (all levels)
- Patient matching
- Cost savings
- Democratize healthcare
Example 2: Cost Savings

- The average estimated cost of a telehealth visit saves about $100 or more compared to the estimated cost for in-person care (Red Quill Consulting, 2014).
- The average telehealth visit ranges from $40-$50, while in-person care can cost as much as $176.
- Sixty percent of the visits were resolved with prescriptions.
- “Savings are approximately 70 percent of the average cost of care that the patient would have used in the other settings.”

“In 2015, US-based research centres found that a common class of heart drugs called beta blockers (block the effects of adrenaline, may prolong ovarian cancer patients' survival. This discovery came after the researchers reviewed more than 1,400 patient records, and identified an obvious pattern among those with ovarian cancer who were using beta blockers, most often to control their blood pressure. Women taking earlier versions of this class of drug typically lived for almost eight years after their cancer diagnosis, compared with just three and a half years for the women not taking any beta blocker. This information was lying in plain sight, no invasive procedures or testing required. We could have found it years earlier if we had had the data.”

http://www.nytimes.com/2016/02/07/opinion/sunday/give-up-your-data-to-cure-disease.html?_r=1
What are the perils?

- Consumers have no control over data (e.g. Google)
- Lack of validation of data sources and lack of attention to meta data
- Lack of behavioural and social data
- Useless data mines (for both patient and HCP)
- Data overload (TMI)
- Tiresome data collection
- Lack of open APIs to pull ecosystem together
“I also know what's worse than not enough information: misinformation or too much information. In this information age, we seem to have plenty of both.”

“We can spend hours reading, watching, listening, or commenting without accomplishing anything at all.”

“While computers are great at sorting through data quickly and efficiently, humans aren't. In fact, "more," often clogs our ability to discern and decide.”

What are the perils?

- Interoperability problems and lack of tethering
- Lack of sophisticated data management systems
- Data alone does not deliver patient outcomes
- Erosion of HCP and patient relationship
- Unnatural systems language
- Accuracy issues of devices
- Lack of clinical evidence
What are the perils?

- Data tinkering and privacy issues
- Data security issues and hacking
- Data hoarding and HCPs restricting access
Example 5: Privacy

- First half of 2015, there were more than 245.9 million records breached worldwide
- Healthcare industry historically has had the highest number of data breaches – 21.1% of all breaches
- Largest breach impacted 80 million consumers of US health insurance company Anthem – score level 10 / "catastrophic."
- EHR vendor Medical Informatics Engineering also was in the top 10 most notable hacks - score of 8.8 / "severe" breach
- New York-based Excellus BlueCross BlueShield suffered a breach in Sept 2015 that could put 10 million of its members' personal records at risk

Example 6: Hacking

• Care is expensive! What the Anthem hackers were after is the medical provider account number associated with a person’s name, social security number and birth date.

• The stolen medical accounts stay valid for months until legitimate patients start getting invoices.

• Medical companies have needed little fraud detection and therefore their detection and recovery instincts are not yet up to the challenge.

How can we face up to the challenge of making data work for us?
Process thinking

1. Define the level where you add most value: Macro, meso or micro.

2. Examine knowledge and wisdom: Information, context and needs.

3. Define data capabilities: What does your data need to do to provide information, facilitate knowledge and enable wisdom?

4. Formulate a comprehensive customer value proposition: package the data so it adds value to the customer rather than enhancing your device, platform, solution or app.
Enhancing Value Propositions

- Data with a strong evidence-base
- Involve HCP in CVP development
- Collect behavioural and social data
- Adhere to the regulation (e.g. FDA approval) or better, drive best practice
- Become a central platforms to provide connections between disconnected data mines/silos, or connect with one
- Be the provider of secure platforms, cloud and apps
Enhancing Value Propositions

- Work on interoperability issues
- Become a health data concierge or care coordinator to manage data
- Provide a meaningful use of data
- Develop a deep understanding consumer behaviour and social aspects of care
- Consider gamification to facilitate adoption, adherence and retention
- Facilitate relationship-building
- Focus on socio-economic issues not tech issues
• **Salesforce platform** - gives a ‘panoramic view of the patient’
Open cloud technology, enables to aggregate data whether it's from devices or EMRs or other sources

• Spans patient acquisition, care delivery, engagement and analytics, consists of software-as-a-service offerings for marketing, sales, service, and a community option to share information with caregivers, be those clinicians or family members

• Aim to generate $1 billion in annual revenue
**Medivizor** - medical health startup collects secondary data, personalizes health information and keeps patients up to date with the latest medical news

- Enables information-seekers access easy-to-read and relevant information - in one place
- Personalized health information
- Medivizor is free to the user and makes money from health institutions

[http://www.israel21c.org/goodbye-dr-google-hello-medivizor/](http://www.israel21c.org/goodbye-dr-google-hello-medivizor/)
• Gecko Health Innovations - platform for chronic respiratory disease management (also for kids) that combines a sensor device that connects to most inhalers, a data analytics platform, an accessible user interface, and behavioral triggers to help asthma and COPD patients manage their condition.

• Goal of improving clinical outcomes with clear evidence-base

What is your main problem?

Where is your CVP stuck?

What resources and competencies do you need to develop?

Other questions?