

30th India Fellowship Seminar

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Wellness app/Wearables - challenges and opportunities in designing and pricing of products

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Agenda

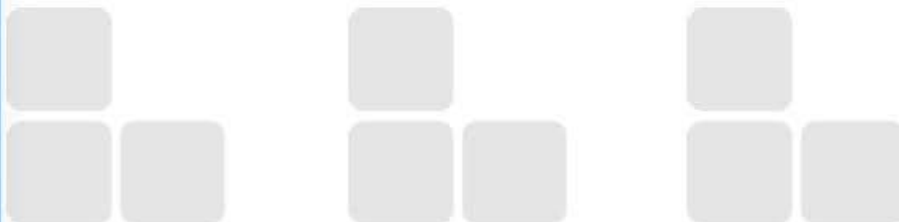


- Introduction
- Wearables - types & benefits
- Regulatory Perspective
- Product Design and Pricing
 - Opportunities
 - Challenges
- Conclusion

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Introduction



- Major health product categories
 - Indemnity products
 - Hospitalization expenses
 - Pre and post hospitalization expenses
 - Ambulance costs
 - Critical illness
 - Sum assured paid on diagnosis of insured illness
 - Hospital Cash
 - Cash benefit for every day of hospitalization
- Other product categories include travel insurance, personal accident Insurance etc.

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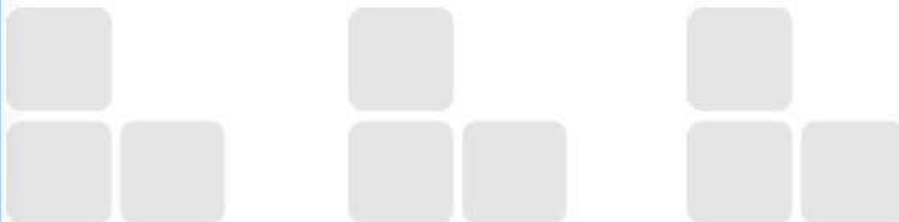


- InsurTech - Era of technology and innovations.
- Focus on data analytics.
- Insurers started branding themselves as health partners instead of bill payers.






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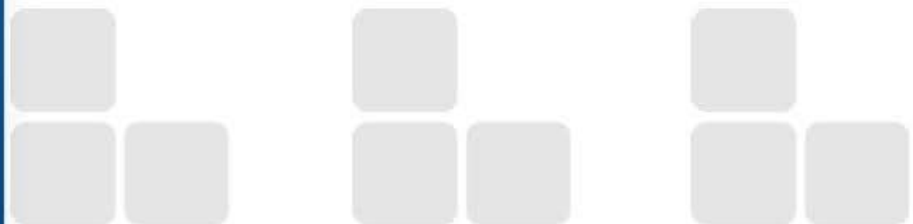


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Wearables - types

<p>Fitness trackers</p>	<ul style="list-style-type: none"> • Number of steps • Heart Rate • Sleeping hours 	
<p>Skin patches sensors</p>	<ul style="list-style-type: none"> • Fitness monitoring • Glucose level 	
<p>Smart contact lenses</p>	<ul style="list-style-type: none"> • Glucose monitoring • Intraocular pressure 	
<p>Medical E-textiles</p>	<ul style="list-style-type: none"> • Tracking patients vitals • Drugs delivery 	
<p>Implanted devices</p>	<ul style="list-style-type: none"> • Heart rhythm 	



Some popular wellness apps

Couch to 5K

- Help in building stamina for running
- Free on cost

Headspace

- Teaches meditation
- Helping in relieving stress

Apple health kit

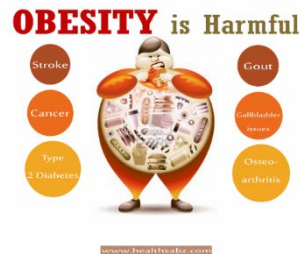
- Counts number of steps
- Heart rhythm
- Sleeping hours

Health Jinn

- Count number of steps
- Personal health coach

Benefits of wearables

- Better risk assessment.
- Continuous data points instead of one time snapshot.
- Increased customer engagement.
- Avoid lifestyle related diseases like



Obesity

Chronic backache

- Incentives for maintaining good health.

Case studies outside India

Vitality, UK

- Uses multiple trackers
- Various rewards schemes based on activity.

Oscar Health, US

- Any tracker working with Apple Health Kit
- \$1 credit every time a step goal is reached, up to \$100 in Amazon vouchers

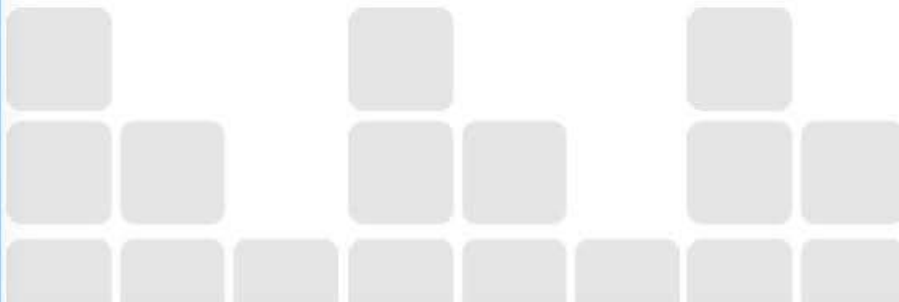
United Healthcare, US

- Uses Fitbit
- Up to \$4 per day based on step goals, in deductibles credits.

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Regulatory Perspective



- Health Regulation, 2016
 - Section 19:
 - Allow to incentivize based on fitness and wellness criteria.
 - Incentives should be either on premium or services offered by network providers.
- IRDAI working group report on “Innovations in insurance involving wearables / portable devices”.

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Design - General approach



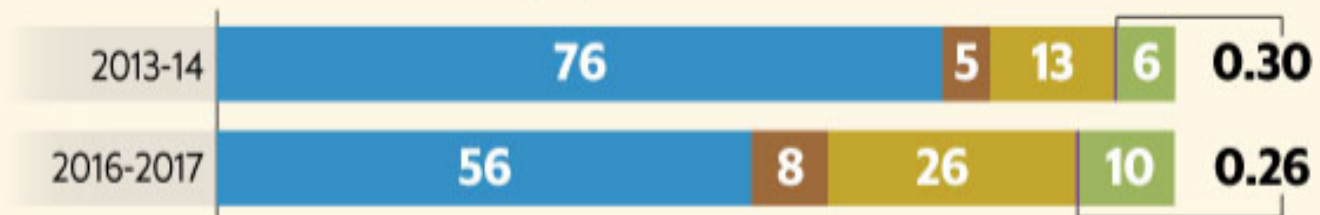
- Identify the target market and its needs.
- Develop product that meets the needs.
- Assess the product demand.
- Distribution strategy.
- Run through product approval process to ensure it
 - Meets policyholder needs and expectations.
 - Minimises policyholder detriment.
 - Manages internal and external stakeholder interests and conflicts (Actuarial/Underwriting/Sales and Marketing/Claims Management/Regulator)

Design - Current gaps

- With limited consumer engagement, insurer is just a “payer for care” .
- Low policyholder awareness.
- Low penetration levels.

Health insurance penetration

■ Uncovered population ■ People covered by insurer (other than govt schemes)
■ People covered by government sponsored schemes ■ Central Government Health Scheme (CGHS)
■ Employees' State Insurance Scheme (ESIS) (in %)



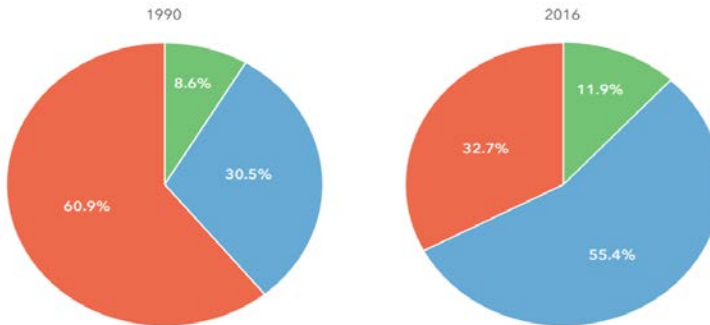
Source: National Health Profile 2015, 2018 and IRDA Statistical Handbook 2016-17

Design - Current gaps

- Limited product differentiation in the market.
- High distribution costs.
- Changing disease epidemiology - customer needs evolving quicker than the benefit design.

Figure 2
Contribution of major disease groups to total DALYs in India, 1990 and 2016

● Communicable, maternal, neonatal, and nutritional diseases ● Non-communicable diseases ● Injuries

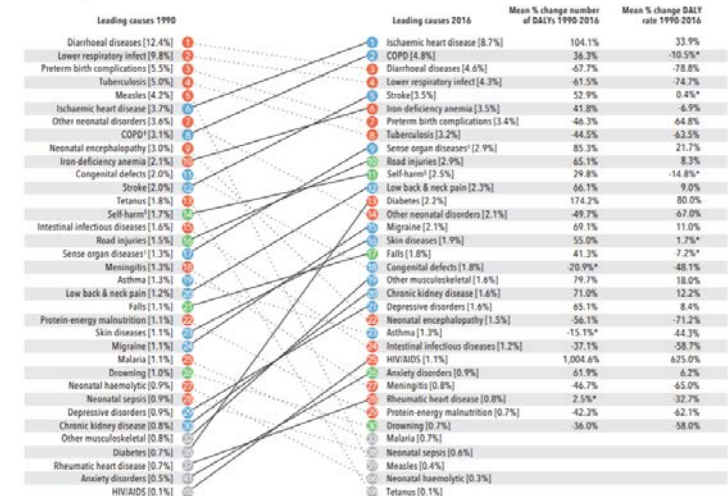


India had 33% of the total DALYs from CMNNDs, 55% from NCDs, and 12% from injuries in 2016. In 1990, this was 61%, 30%, and 9% of DALYs, respectively.

Source: India: Health of the Nation's States
The India State-Level Disease Burden Initiative

Figure 10
Change in DALYs number and rate for the leading individual causes in India from 1990 to 2016

● Communicable, maternal, neonatal, and nutritional diseases ● Non-communicable diseases ● Injuries — same or increase decrease



*Change not significant
The percent figure in bracket next to each cause is DALYs from that cause out of the total DALYs.

†COPD is chronic obstructive pulmonary disease.
‡Sense organ diseases includes mainly hearing and vision loss.
§Self-harm refers to suicide and the nonfatal outcomes of self-harm.

Design - Current gaps



- Policy reforms impacting product design:
 - **Mental Healthcare Act, 2017** - As per Sec 21(4) of the Act, “every insurer shall make provision for medical insurance for treatment of mental illness on the same basis as is available for treatment of physical illness.”
 - **HIV and AIDs Act, 2017** - As per Section 3 (j) of the Act, “no person shall discriminate against the protected person on any ground including any of the following, namely the denial of, or unfair treatment in, the provision of insurance unless supported by actuarial studies.”
 - IRDAI working group report on “**Standardization of exclusions in health insurance contracts**” .

Is wellness related product
the answer?

Design - Opportunities



- Inclusion of wearable technology is likely to
 - boost customer engagement through regular contact.
 - result in positive risk selection for insurer.
 - encourage customer to have healthier lifestyle.
- Promote product differentiation and possibly help keep up with changing policies and reforms.
 - Wellness focused products with solutions to support mental wellbeing.
 - Disease specific products to manage chronic conditions.
 - products with continuous monitoring of health - ongoing premiums linked to measurable medical health status.

Design - Opportunities



- Provide opportunity to **better understand** the **needs and behaviours** of customers.
- Creating a “**healthy lifestyle proposition**” that **modifies** customer **behaviour** can help drive health improvements.
- Products with wearables/wellness apps
 - likely to **improve health awareness and penetration**.
 - offer the potential to reach **new segment of customers**.
 - can create opportunity for **new distribution channels** and **reduce distribution costs**.

Design Evolution

Reactive care

Healthy lifestyle proposition



Pricing - General approach

- Collect, clean and process relevant data.
- Define homogenous risk groups.
- Estimate burning cost.
- Adjust for
 - Benefit design changes.
 - Medical inflation.
 - Proposed target market.
 - Area changes.
- Load for expenses, commission and cost of capital.
- Scenario and sensitivity testing.

Pricing - Current gaps

- Limited data such as age, gender, height, weight, test results used risk assessment.
- One time risk assessment - no mechanism to continuously monitor health and risk.
- Data challenges impact pricing.
- Cross subsidies between new and existing business.
- Increasing chronic disease burden likely to impact healthcare costs.

Disease burden to cost India \$6.2 trillion by 2030

Chronic disease to cost \$47 trillion by 2030



Represents >60%
of global GDP in 2015

Source: WFP

Can wellness related
products fill these gaps?

Pricing - Opportunities

AIA Vitality Age



- Data captured likely to be a good indicator of customer's health - **better risk assessment**.
- Allows for **continuous risk assessment**.
- Allows for **more accurate risk segmentation** based on larger data pool and risk factors.
- Incentivising the customer to help them manage lifestyle diseases can **delay onset of certain diseases** and **manage costs for insurers**.
- **Traditional health data + "self quantified data"** created through wearables can assist with
 - Pricing assumptions
 - Reserving assumptions
 - Advanced data analytics
 - Better decision making
- Can help create a **"data ecosystem"** that can facilitate more and accurate data collection along with supply chain management.

Traditional Insurance

Value Based Insurance

Society

Improved
productivity

Reduced
healthcare
expenditure

Policyholder

Value for
money

Additional
benefits

Healthier
lifestyle

Insurer

Positive
selection

Better claims
experience

Lower lapses

Higher
margins

Case study



- Vitality, South Africa
 - Participation in health and fitness programmes reduces health claims by 16%.
 - Logging fitness activities reduces risk by 22% for the unhealthiest category of participants.
 - Participating members are upto 64% less likely to lapse their insurance than non-participants;
 - Participating members have upto 53% lower mortality rate than non-participants.

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Design Challenges



- Is the **correlation** between health indicator and morbidity clinically proven?
- How quickly is the **new research** incorporated into design?
- Whether to use an **app** or a **device**?
- App requires phone to be carried everywhere.
- **Different apps** may show **different results**.
- **Which wearable** to use?
- **Limited** use of **rewards** allowed.

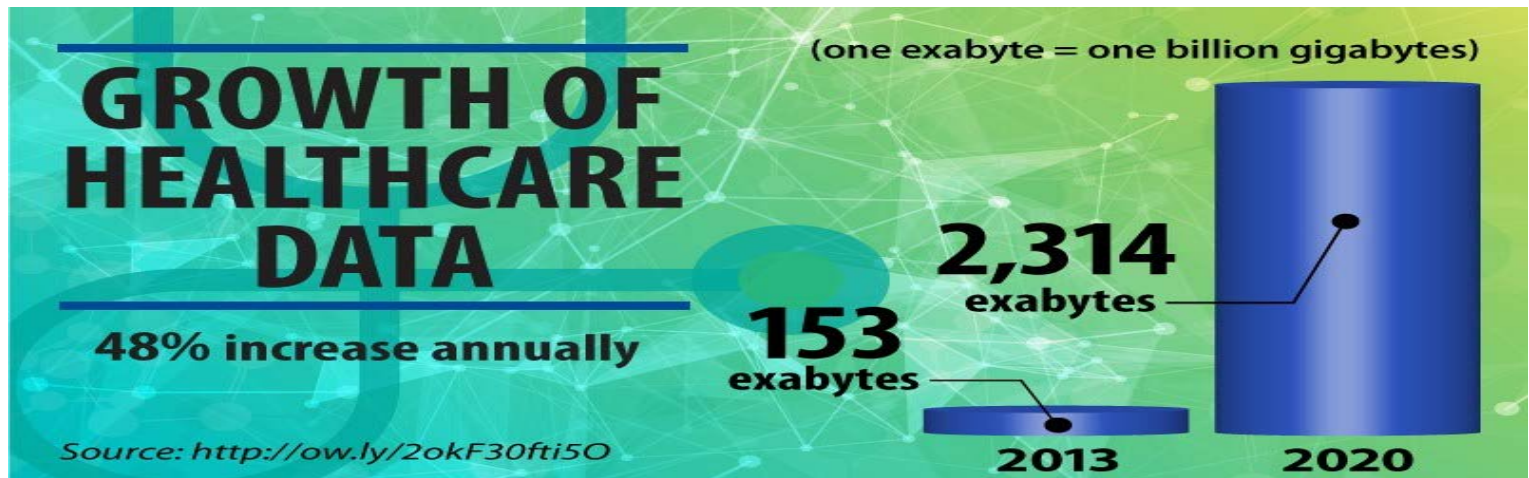
Pricing Challenges



- Different target market from the usual indemnity product makes the available data less relevant.
- Move from cohort based pricing to individual based pricing.
- Different modeling techniques required.
- Devising mechanisms for portability of the wellness component of health insurance policies.
- Devising a reward system.
- May increase initial claims costs.

Pricing Challenges

Data



- Extra cost to **store** data.
- Costs for data **security**.
- Only used for **purpose** for which collected.

Pricing Challenges



Data

- Which data to capture?
- Interpreting dynamic data.
- Different rewards from different devices for the same level of physical activity.
- Difficulty in linking wearable data with initial claims experience.

Pricing Challenges

- Who will **pay** for the device?
- Increased **cost of meeting requirements** set by company (R&D).



- Increased likelihood of **frauds** (who is wearing the device).
- Constantly **changing environment** may invalidate the reward system.

Regulatory Challenges

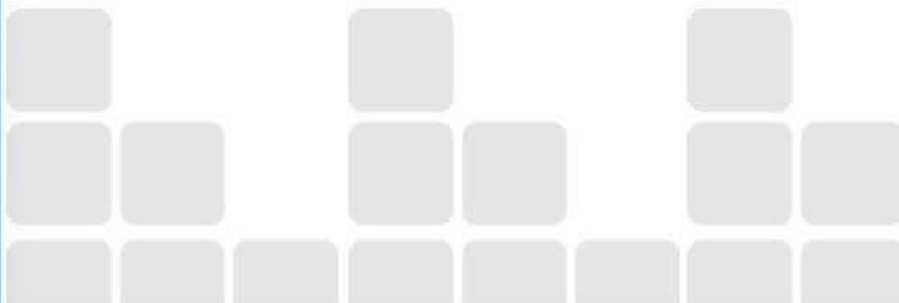


- Regulations around
 - data privacy
 - data storageneed to be formulated.
- Treatment of **policyholders opting out** of wellness products.
- Requirement for setting **minimum standards** for device.
- A **different set of complaints** that may need to be dealt with.

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Conclusions



- Wellness products can be used as an **effective consumer engagement tool**.
- Wellness products with tailored benefits are likely to **promote a healthier lifestyle**.
- **Success** depends on the **design** and **implementation** of the wellness component.
- **Data privacy issues** need to be addressed.
- A **robust data strategy** required to recognise these opportunities.

Thank You

Questions?

Citations



- <https://www.actuariesindia.org/SeminarDocs/12%20CIHCI/ppt/Embedding%20wellness%20in%20the%20Insurance%20model%20-%20Anuradha.pdf>
- InsurTech-WorkingGroup Findings&Recommendations
- <https://www.actuaries.org.uk/documents/final-draft-sessional-paper-wearables-and-iot-working-party>
- https://www.healthdata.org/sites/default/files/files/policy_report/2017/India_Health_of_the_Nation%27s_States_Report_2017.pdf
- <https://www.thehindubusinessline.com/news/science/ncds-account-for-53-of-the-disease-burden-in-india-study/article9187723.ece>

Vitality, UK

**8 vitality
points**

- 12,500 steps in a day
- Burn 300k calories
- 60+ min cycling

**5 vitality
points**

- 10,000 steps in a day
- Burn 150k calories
- 30-50 min cycling

**3 vitality
points**

- 7,000 steps in a day