

## Incentives that create healthy behaviour

Breakfast seminar, given by Dr Craig Nossel, 21 July 2011

This is the latest in the series of International Breakfast Seminars held by C3 Collaborating for Health ([www.c3health.org](http://www.c3health.org)).

Please note that the slides from this seminar are available on the C3 website.

### Introduction from Christine Hancock, C3 Collaborating for Health

Christine introduced C3 Collaborating for Health, a global charity that brings together diverse stakeholders to address the challenge of chronic disease through tackling the major risk factors. She also talked briefly about The House of St Barnabas, the historic building in which the seminar is being held – Charles Dickens is said to have written *A Tale of Two Cities* under the tree in the garden. The House now runs a lifeskills programme for homeless people.

The idea behind the seminar series is to discuss with a London audience work being done overseas that includes ideas we can use. PruHealth has brought Dr Craig Nossel to the UK from South Africa. Christine has been interested in the ways in which the commercial insurance programme can help to incentivise good health, on which Craig will speak. He is a physician with an MBA and an interest in sports medicine.

### Incentives that create healthy behaviour and show health and financial results

Craig thanked C3 for the invitation and explained that he is in the UK with a group of 50 children for a soccer tournament.

Discovery Health's 'Vitality' programme of incentives has been running for 12 years in South Africa, and is now being introduced to other parts of the world:

- it has been in place in the UK for about five years, with PruHealth;
- a new joint venture with Humana (Humana Vitality) was launched two weeks ago in the United States;
- a partnership with Ping An in China has being established.

While Vitality is a key part of the Discovery business, there are many ideas and initiatives in the programme that can be adapted and used in broader health promotion and healthcare policy.

Discovery was started in 1993 in South Africa, where it pioneered a consumer-focused health insurance product. Since its inception, the business has grown exponentially and broadened into other areas of financial services, as well as into other geographical regions. Vitality, the scientific-based wellness company, was introduced to the South African market in 1998. At the time it really seemed like a novel idea to pay for health as opposed to sickness – over the last few years, we have, however, seen much greater awareness of preventative care and a much greater focus on wellness by industry and consumers.

**Insurance is the product; Vitality is the incentive scheme.**

*The Economist* asked in February 2010: 'why is Discovery, a South African firm, paying its customers to get healthy while most Western insurance giants do not?'



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## Background to Vitality

The 3-4-50 model (three risk factors; four chronic diseases; over 50 per cent of the world's disease burden) clearly defines the health and consequent economic burden associated with poor lifestyle choices, and how important wellness is to individuals, businesses, and countries as a whole. Craig presented a slide showing how the probability of an overweight male aged 50 who smokes surviving 15 years without coronary artery disease, stroke or diabetes is 56 per cent. If he quits smoking, the probability is increased to 71 per cent; if he also gets active it increases to 81 per cent; and if he also loses weight, it is increased to 86 per cent. Over the past few years we have seen more and more academic papers being published on the importance and effects of lifestyle choices. At this stage, the debate has shifted from what works, to how do we actually change behaviour? This is the billion dollar question facing businesses and governments around the world. Many of us wake up in the morning and know we should do our 30 minutes a day of exercise: the challenge is overcoming the barriers, be it cold weather, an early morning meeting, a late evening...

Vitality has focused on lowering the barriers to leading a healthy lifestyle, by providing, among other things, close to free access to gyms and significant discounts on healthy food, as well as significant rewards that can be achieved by participating in the programme. The rewards include up to a 50% discount on holidays, up to 35% discount on flights, free movies, and a whole range of other rewards that drive people to improve their health.

Behavioural economists provide important insights for understanding motivation – issues such as over-optimism and hyperbolic discounting. While people may know the risks associated with certain behaviours, they do not believe it will happen to them, and do not believe that the value of health in the distant future is worth the effort today. Unfortunately, traditional health-promotion models have assumed rational behaviour.

## Philosophy and structure of Vitality

- Members complete an initial health assessment, which engages people in thinking about their health.
- The 'Vitality Age' tool calculates an individual's 'Vitality Age', which shows years-of-life-lost based on certain risk factors, such as body mass index, cholesterol level and physical activity. A Vitality Age that is more than actual age helps people to think differently about their health and understand how their lifestyles are affecting their health.
- The individual is then given a 'personal pathway' for health, relevant to the individual's health status.
- The structure of the programme allows members to earn Vitality points by engaging in activities that are relevant to their health risk profile. For example, while both an overweight diabetic 50-year-old and a young, fit 20-year-old would both earn Vitality points for exercising at a gym, the 50-year-old would earn more points, as the health value to him is far greater. Messaging is also tailored according to the member's profile – for example, a message to young people may be more focused on 'sexiness' than on cardiovascular disease risk.
- Each member earns a Vitality 'status' (blue, bronze, silver, gold and diamond) through engaging with the programme. Craig said that people discuss their Vitality status and actually compete on it.
- Finally, there is a wide range of rewards for participating in the programme and for achieving various goals, giving real value to making healthy lifestyle changes. Rewards include discounted flights, accommodation, holidays, cinema tickets and electronic goods.

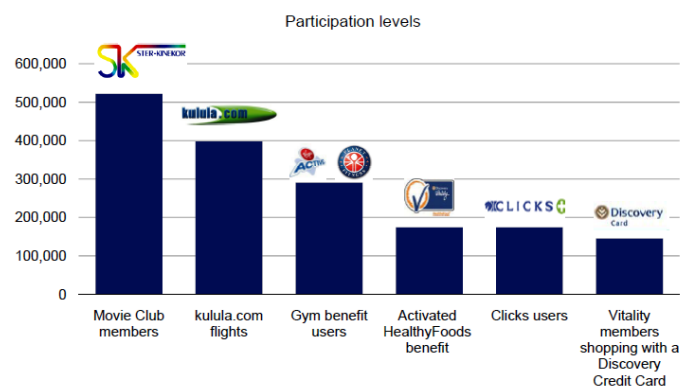
The Vitality Age algorithm was based on 75 million years of data from many studies (e.g. the Nurses' Health Study), that show the impact of risks, such as obesity, smoking, poor nutrition and inactivity on mortality.

The Vitality pathway is personalised according to the particular risks faced by the insured person. For example, for one person the main focus would be stopping smoking, while for another it could be getting more physically active. Craig stressed that there is equal opportunity for both healthy and unhealthy people to achieve a high Vitality status.

The programme is underpinned by solid clinical evidence and driven by the broad range of rewards on offer. People want to earn points to earn better rewards, so they are happy to engage in the programme, for example going to a dietician for a nutrition assessment or going to gym.

Vitality has a travel partnership with BA and Kulula (a local budget airline), hotel chains (where up to 50 per cent discounts are offered), cashback at Click stores (the South African equivalent of the Boots stores in the UK), big discounts at cinemas and healthy food at Pick n Pay (a major supermarket). Discovery is also the 5<sup>th</sup>-largest credit card provider in the country (giving up to a 20 per cent discount at some stores, depending on Vitality status).

## Reward utilisation is high across the benefit spectrum



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### Overview of the Vitality rewards

Vitality has collaborated with Carnegie Mellon and others on a study of 9,000 people, looking at the effect of different incentives on getting people more engaged in the programme – specifically by getting more active. In the study, members were randomly assigned to an incentive group, such as ‘tangible’ (i.e. self-interest), charitable and a lottery (self-interest, but with low chance of high reward). The more active the person is (i.e. the more gym visits), the higher the value of the incentive.

### Clinical impact of Vitality

The company has undertaken three ‘VIP’ studies, and also, most recently, a longitudinal study.

#### Does engagement in wellness reduce healthcare costs?

The VIP studies assessed more than 948,000 people in 2003–7 and the research was done in partnership with universities including Cape Town and Harvard (<http://www.ncbi.nlm.nih.gov/pubmed/20073387> and <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2774634/>).

‘Engagement’ was defined by the number of gym visits – with ‘highly engaged’ defined as anyone going to the gym more than 24 times a year. Craig noted that, although this does not in itself sound like much, anyone in this category is probably doing additional exercise as well. When attending the gym, members swipe a Vitality card to show that they have visited.

VIP study 1: Vitality engagement is related to lower healthcare costs

- This study looked at hospital admissions for engaged and not-engaged people – and found lower costs across the board for those who were engaged.

VIP study 2: Vitality engagement reduces the cost of managing NCDs

- Again, there are reduced costs, and there is evidence supporting lower hospital costs. For example, the risk-adjusted hospital cost for cancer of an engaged member is 90 per cent that of a non-engaged person, and for mental health just 79 per cent.

VIP study 3: Fitter people spend less time in hospital

- Among those in hospital, fitter people spend less time in hospital and incur lower costs. Their return to work is also quicker.

## Does Vitality induce wellness?

Vitality engagement was tracked over a five-year period, comparing those who became active during that time with those who stayed inactive. Initially, about 50 per cent of those in the programme were inactive, and this fell to about 30 per cent. The proportion of those in the programme who were gym members increased from 21.1 to 31.8 per cent.

The study compared outcomes that are associated with this transition between engagement levels. For example, hospital costs fell by 6 per cent per member over five years among those who moved from inactive to active. In addition, among those who were initially already active, staying active lowered costs by 8 per cent – and if they became more active, costs were 9 per cent lower.

Each additional gym visit per week has an impact on admissions to hospital. Going from no visits to two gym visits a week between years 1 to 3 correlates to a 13 per cent lower odds ratio of being hospitalised. This shows how important access is (i.e. keeping the cost of gym-going low or zero).

The successes of the Vitality programme have allowed Discovery's premiums to be contained.

### Case study: the impact of HealthyFood™

The HealthyFood™ product was launched in 2010. It is powered by a partnership with Pick n Pay (the largest retailer in South Africa), where members get up to 25 per cent off all healthy food in the store. The discounts start at 10 per cent, increasing to 25 per cent if members complete the health assessment. This incentive to increase the discount resulted in a 600 per cent increase in the number of people who completed the assessment.

A nutrition panel used dietary guidelines to select which foods would be classified as HealthyFood™ items. From 61,000 products at Pick n Pay, 10,000 were classified as healthy. The company has undertaken a similar process in the UK, in conjunction with the MRC. The company is working with Sainsbury's

The discounts are extensively marketed: each member get a healthy food card, which they swipe as they pay to access the discounts. HealthyFoods™ are indicated on the itemised receipt for all shoppers – not just those who have activated the benefit. The discount is then paid back into the individual's bank account at the end of the month. A TV show featuring real-life case studies and expert advice – for example food preparation tips from a dietician – was aired on one of the lifestyle channels.

Craig noted that the HealthyFood™ initiative is not about banning unhealthy foods, but rather about encouraging a change towards healthier options through good messaging and marketing, and making the process easy. Data to date indicates that the product is proving to be a valuable case study in behaviour change. The proportion of HealthyFoods™ in the average basket has increased from about 18 per cent pre-launch to about 28 per cent.

### Broader health-promotion initiatives

- The Healthy Active Kids Report Card is a broader health-promotion initiative that looks at factors such as physical activity, nutrition, screen-time, weight, stunting and smoking to give a broader perspective of health in schools.
- The Vitality Schools Program aims to develop 'healthy active kids' who will continue healthy habits into later life. The programme is linked with the Department of Education and it is powered by a website ([www.vitalityschools.co.za](http://www.vitalityschools.co.za)) that provides all schools (not just Vitality members) with easy access to educational material related to healthy lifestyles. Schools are able to download lesson plans and posters while teachers have access to training via workshops. Tuckshop initiatives are also available where advice on menu items is provided.
- Coaching manuals (e.g. soccer, swimming etc.) have been produced, which provide coaches with expert advice from sports scientists on how to train kids.
- Obesity information packs have been created for GPs to improve their knowledge of the disease and how to manage it. About 5,000 GPs have already been trained in child obesity.

- A partnership with KNVB (Netherlands soccer) and Utrecht University has been established to address the social and health aspects of sports, such as soccer.
- A Vitality Wellness Network that includes pharmacies, biokineticists, dieticians and Vitality Wellness Centres has been established to provide members with national access to health checks by health professionals.
- Wellness and Fitness Conventions have been held, attended by 1,000 healthcare and fitness professionals.
- The 'Healthiest City' project looked at data from major cities in South Africa, comparing health issues including obesity, blood pressure, smoking and physical activity. The project raised awareness and fostered competition and the next phase will look at the facilities available in each city (i.e. access).
- Most recent has been the Healthy Company Index survey, in which 101 companies participated.
  - The aim is to help companies understand the health of their employees. Vitality Age was used as the basis for the Healthiest Company ranking, while other awards were also included, based on relevant risk factors, such as the Most Physically Active Company.
  - Sharing best practice is important, and corporates often respond well to this kind of data. For example, rates of absenteeism due to illness were over 30 per cent higher among those whose Vitality Age was higher than their actual age, compared to those for whom it was lower than, or equal to, their actual age.
  - Vitality is now writing up what it is that makes the top companies healthy, and is submitting papers to journals using data from this initiative. The aim is to track data over five years for a longitudinal study.

## Summary

Vitality has over 3.7 million clients and it will be very interesting to compare the data from the United States, United Kingdom, South Africa and (soon) China.

The company's research – working with behavioural economists, exercise experts, dieticians is essential for the credibility of the programme. The partnerships with global leaders as well as local industry leaders in various countries play an important role in helping provide access to health promoting initiatives, and for rewarding healthy behaviours.

There is a critical need to help people lead a healthy lifestyle and to sustain the behaviour changes.

## Discussion

Mary Phillips (Medical Research Council)

- What is the demography of people in the Vitality programme?
  - Most of the membership base in South Africa are middle to upper income throughout the country. Research shows that the health profile is very similar to what one sees in the United States and United Kingdom.

Fiona Adshead (PricewaterhouseCoopers)

- How do you commercialise this project? How do you persuade partners to work – how do you share the risk and reward?
  - Craig confirmed that the programme is financially viable.
  - Each partnership is different. From a health-insurance perspective (e.g. the partnership with Humana), it results in lower claims; with Pick n Pay, there was a shift in the number of people going into the stores (for gyms, the staying rate is greater even in financially strained times; for airlines and



cinemas, the incentive is more bums on seats; and it reduces the number of empty rooms in hotels.

- Some partners enjoy the ‘health stamp’ that Vitality brings.

Jack Winkler (Nutrition Policy Unit)

- Jack asked why no drinks and no processed foods were permitted on the list of healthy foods, as he felt this is quite extreme.
  - Craig said that the nutrition panel used a combination of the South Africa Food-based Dietary Guidelines and international dietary guidelines to determine what a ‘healthy’ food is and guide the selection criteria for the HealthyFood™ list. The panel felt that promoting whole foods was appropriate, and within that they looked at salt, fat, sugar etc. Safe drinking water is also promoted in the HealthyFood™ programme, and Craig noted that they are trying to shift people to make healthy choices, with the statistics reflecting that they are having that impact.

Phil James (International Obesity Taskforce)

- Phil is interested in the economic aspect of Vitality. The programme motivates and incentivises people by using mortality (i.e. lives lost) but mortality has a very modest effect on costs compared with morbidity. The costs that the company faces are actually based on morbidity rather than mortality.
  - Craig said that the relative association is what is important: Vitality Age is the incentive, but does not drive the actual, behind-the-scenes costs and estimates. Mortality is used in Vitality Age because it is easier to understand from a consumer perspective.

Stefan Wisbauer (UK Preventive Medicine)

- Stefan is a mathematician by training, and was wondering whether the impact of expected behaviour change will be sustained. The beauty of the Vitality programme is that it is scalable – but is it sustainable?
  - The important thing for business is the scale – the bigger the scale, the more protected you are against volatility. The points structure and benefits are reviewed annually, but no significant changes to these have had to be made in South Africa to date. A HealthyFood™ discount of 25 per cent is clearly enough in South Africa to motivate people; but levels could be very different in different markets.
  - They continuously look at the structure of the programme in all their markets and work hard to provide new innovative product enhancements.

Graham Rich (Boston Consulting Group)

- The scope and depth of the programme is impressive, and he is interested to see what happens in the UK. He noted that all the incentives have been framed in a rewards-based way – but negative incentives (i.e. levying a small penalty) can be particularly incentivising. Has Vitality looked at this?
  - As a company, this is about positive messaging (e.g. have a health assessment to avoid an increase in co-payments), rather than penalising – this is linked to the company’s brand and positioning.
  - Currently members of the Vitality gym programme get an 80% discount off the monthly fee, but if a member does not go a certain number of times in the year, the discount drops to 50%.

Tim Oliver (Queen Mary, University of London)

- None of the research seems to take sunshine into account, which really impacts on exercise. He also asked about TB as a confounder.
  - There are elements such as sunshine, mental wellbeing etc. that the company may look to add to Vitality in the future.

- Within certain employer groups there are issues with TB, but it is not something the company has addressed as yet. In South Africa, there is a close link between HIV and TB, and people are incentivised to have an HIV test.

Judy Hargadon (School Food Trust)

- Judy asked whether Vitality has looked at any cases where the disincentives outweigh incentives (e.g. free school meal)?
  - Craig could not think of any examples of this.

Susie Fairfax (PR consultant)

- Susie commented that she had enjoyed the presentation tremendously, and wondered why it is that South Africa has come up with this kind of programme before anywhere else?
  - Craig said that there may be business factors that have fed into this. The corporate environment is fairly homogeneous (for example, the gym and retail partners), and the scale of using the brand has allowed these to be developed.
  - It is also part of the culture of the business: innovating. Tal Gilbert (also with Discovery) noted that the financial services structure in South Africa is interesting – companies are freer to innovate there than in the United States or United Kingdom.
  - The business is now progressing very well in other countries, so South Africa almost serves as a lab for them.

Christine thanked everyone for attending, and gave details of the next two seminars:

- 29 September: Jackie Sherris (PATH) on women's cancer and the lessons it gives for NCD prevention;
- 18 October: Tracey Koehlmoos on learning from Bangladesh's experience in tackling NCDs.