Executive Summary: The consulting engagement for promoting SUGAR SMART Oxford achieved three aims. First, by analysing the specific context of the King’s Centre Kiosk, the report provides a set of *nudges* in order to minimise sugar consumption through food and drink by consumers in Oxford, particularly among Oxford Brookes students. Based on rich academic literature and examples of the best practice, the report derives three sets of actionable recommendations: re-arrange food and beverages layout, introduce colour coding scheme in menus, and rethink pricing strategies. Second, in order to increase the reach of SUGAR SMART Oxford, the report develops optimal marketing recommendations, with a particular focus on social media and visual materials (posters and menus). Finally, in order to achieve relative scalability at the university level, the report suggests three channels for targeting Oxford University students through 1) student-led college initiatives, 2) staff-led college projects; and 3) departmental health and sustainability initiatives.

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1. Micro Level Analyses – How to Nudge into Sugar Smart?

Fuel Your Exam SUGAR SMART

Blood Sugar Levels

High refined sugar

Fibre / protein rich with natural sugars

High protein and fibre, low sugar

Hunger Zone

1 hr 2 hr 3 hr

Recommended Exam Brain Foods:

- High refined sugar
- Fibre / protein rich with natural sugars
- High protein and fibre, low sugar

Images of recommended foods:
- Almonds
- Hummus with celery
- Granola bars
- Oatmeal with berries
- Soup
Focus on the case study – Kiosk at the King’s Centre

Following an interview with Sue Edridge, Business Development Manager at the King’s Centre, we collated some very useful information regarding the operations and purpose of the Kiosk. The Kiosk was set up this year with the purpose of offering Oxford Brookes University’s students the opportunity to buy a snack or meal prior to or after attendance at the King’s Centre for an exam. The King’s Centre Atrium holds students prior to entering exam halls and is a generous space offering free water from a dispenser with compostable cups available and tables with chairs ideal for students that may wish to have a sit-down meal. The Kiosk currently offers a range of items from packaged products such as crisps and snack bars to freshly made fruit pots and flapjack. Thinking forward to the next winter exam season when this kiosk will re-open, Sue Edridge mentioned the potential to offer hot food.

Encouraging healthier eating and drinking choices is a struggle to not sound patronising or nagging. Capitalising on our experiences as students prior to exams it was easy to empathise with the potential desire to eat quick and easy food that often contains very high levels of free sugars. It is also understandable that in the midst of an exam some students may forget or run out of time to eat at all. To exploit the situation of students imminently preparing to do an exam, we discussed displaying large promotional materials in the Atrium highlighting the impact of food choices prior to an exam on hunger and focus over the following few hours (that could equate to an exam).

Without using ‘scare tactics’ and implying that students will lose focus / fall asleep or fail an exam without eating properly, we designed a poster highlighting the very different effects certain foods will have on blood sugar levels over time. Having all experienced the difficulty of knowing what to eat prior to an exam, we also researched some good food choices in the lead up to an exam. By suggesting these options, the poster may inspire students to prepare in advance by choosing a more SUGAR SMART option.

Top Nudge-Based Recommendations

On the operational side of the kiosk, we have considered and now put forward four key recommendations to enhance emphasis on healthier foods that contain less sugar, and reduce consumption of those that are damaging in this respect:

Arrange the general layout of food and drink items in the kiosk such that healthier (less sugary) options are at the front of the kiosk and are more accessible, whereas more sugary items are slightly more difficult to obtain.

Re-arrange the layout of food and drink items on a menu in order to nudge behaviour towards healthier and less sugary options.
Design a colour coding scheme, which represent different extents of sugar content, and position these in such a way that the more sugar-friendly options are emphasised in the horizontal layout of items.

Alter the pricing structure so that less sugary drinks are subsidised (prices are lowered) by raising the prices for more sugary drinks, similar to the “sugar tax”.

The particular positioning and layout of foods and drinks within a context is empirically proven to be effective in nudging eating behaviour towards healthier options and alternatives. For example, Hanks et al (2012) experimented with healthier eating in school lunchtimes by strategically placing certain foods. When one of the two lunch lines was arranged to display healthier foods, sales in the healthier line increased by 18%, whilst sales from the less healthy line fell by 28%.

Specific to the Kiosk, we have decided that the generic layout of food items in the Kiosk should be organised so that green-light (low sugar) items should be at the front of the Kiosk, by the counter so that they are easily accessible, and red-light (high sugar) options are at the back of the Kiosk and must be requested. We expect this to create a bias towards choosing the healthier options as individuals will be put off requesting the more sugary options and will instead substitute for the healthier options that we are aiming to promote.

A simple nudge that can be trialled and has worked in the field of improving eating behaviour is the positioning of items on a menu, which can be replicated to suit the kiosk menu. In particular, the study by Dayan & Hillel (2011) found that, when researching mechanisms to reduce obesity through nudging consumers towards healthier options, items of food placed at the beginning or end of a menu were up to twice as popular as the same items that were placed at the centre of the same menu. This is especially applicable if the items on the counter of the kiosk do not have price labels on them, meaning that decisions made by students can be influenced by the positioning of the item on the menu.

Further, we believe that arranging products within each row, by clearly displaying the healthier options and making them seem more attractive and accessible, will positively impact eating behaviour for those ordering at the kiosk. In order for this to work, we would propose in each category of food, i.e. snacks sandwiches etc, to have a red, yellow and green traffic light system depending on the sugar content of the food or drink itself. This would be in the form of identifiable round stickers that would be placed on the price tag of the item of food in order to maximise awareness of the health content of that particular food or drink.

This, along with a simple sign displaying what each of the colour stickers represents, would create an implicit tendency towards the healthier foods, in the light of greater awareness. Within this scheme, the items can be placed on each counter vertically so that the healthiest options (Green) are more on display than the less healthy options (Red). This further reinforces a nudge system whereby the consumer
is aware of the healthiness of the product based on its sticker colour, and the healthier options are more accessible and visible than the less healthy options. This colour-scheme to incentivise healthier behaviour can be paired with labelling the Kiosk menu with the traffic light system in order to reinforce the nudge and incentive low-sugar foods and drinks.

In terms of pricing decisions, whilst we cannot possibly know optimal prices for the items in the Kiosk, a beneficial action could be raising prices of drinks with higher sugar levels per set amount. Determining which drinks should have their prices raised can be done on a threshold basis. The new “sugar tax” in the UK can provide rough guidelines for the new pricing structure, as drinks with more than 8g of sugar per 100ml face the highest band of tax, and drinks that contain 5-8g of sugar per 100ml face a lower one.

In a rough sense therefore, prices can be reduced by an amount such as 10% on drinks that contain less than 5g of sugar per 100ml, as well as pure fruit juices and other drinks that have other health benefits. This could be done in such a way that the lost revenue from the lower prices on healthy drinks could be made up for by raising prices for those drinks that have higher sugar levels per 100ml.
The impact of discounts in trying to encourage healthier purchasing behaviour of drinks has been researched in Jue et al.’s (2012) study of three sites in the U.S. between October 2009 and May 2010, looking to shift consumers towards zero calorie beverages. Whilst the study did not show much impact of some of their interventions, the 10% discount and discount messaging on the zero-calorie drinks increased their consumption by consumers. Therefore, in our view there is potential to look at nudges in pricing structure, with an emphasis on discounts for less sugary drinks, to be subsidised by increases in the prices of more sugary ones.

The following academic case studies were additionally consulted:

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<th>Authors</th>
<th>Description</th>
<th>Key Findings</th>
<th>Implications</th>
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<td>Hanks et al. (2012), Healthy Convenience: Nudging Students Toward Healthier Choices in the Lunchroom, Journal of Public Health</td>
<td>Looked at encouraging healthier eating in school lunch rooms through strategic placement of certain food items by using two lunch lines (one significantly healthier than other)</td>
<td>In the healthier line, sales of healthier food increased by 18%, while the consumption of less healthy food decreased by 28%.</td>
<td>Strategic positioning of lower sugar snacks and drink items at the kiosk can have impact towards consumers making healthier choices. The study placed emphasis on accessibility of items, and thus keeping more sugary items behind the counter and emphasising the lower sugar ones at the counter and within arm’s length of the consumer.</td>
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<td>Dayan &amp; Hillel (2011), Nudge to obesity II: Menu positions influence food orders, Judgment and Decision Making</td>
<td>This study looked especially at the positioning of food items on a restaurant menu, and how this would affect consumer choices when ordering foods.</td>
<td>Items placed at the beginning or end of the menu were up to twice as popular as when the same items were placed in the centre of the menu.</td>
<td>Designing a simple menu on the kiosk, to go on the wall just by the kiosk or the wall behind the counter, can lead to consumers choosing less sugary items. This would be through emphasising less sugary options at the top or bottom of the menu. This can also be supported by the traffic light identification scheme, whereby less sugary items have some green ‘tag’ next to them, and more sugary items are incentivised against by being labelled with a red ‘tag’.</td>
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<td>Jue et al. (2012), The impact of price discounts and calorie messaging on beverage</td>
<td>This study examined the extent to which pricing structures shifted consumers towards zero-calorie drinks. There were five interventions:</td>
<td>Whilst the results of the study were not consistent, (2) and (3) were statistically significant. (2) resulted in an</td>
<td>The relevant aspect of this study was the fact that a 10% discount on caloric drinks and emphasis of the discount had the largest impact of behaviour. This suggests that perhaps rather than</td>
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Capitalise on Social Media

Another method of decreasing sugar consumption discussed with Sue at the King’s Centre was building up a Social Media presence. Using student-specific SUGAR SMART messaging on Social Media would have a number of advantages for the King’s Centre, especially as it is where a large number of examinations for Oxford Brookes University are held. Virtually all students have some form of Social Media and with 95% of 16-20-year olds accessing Facebook regularly according to YouGov polling, this is a growing way to get the right messages to young people. On the day of an exam, students are often stressed and lacking willpower which means they quickly turn to sugary snacks without much regard for how that will affect their health or energy levels for the exams.

If students can look at the menu and decide which items of food they would like before arriving at the King’s Centre, they will be less tempted by sugary items as they can make their food and drink choices while thinking rationally and not in a stressful environment. Students may even choose to have a balanced breakfast in the King’s Centre as opposed to a rushed sugary snack before they come - the extra time in bed is likely to be a big attraction for many students. In addition, the King’s Centre does not currently sell bottled water in an effort to reduce plastic waste. It does, however, provide free water for people to refill their bottles. As such, it is important to remind students to bring their own reusable water bottles and remind them of free refills, so they do not end up buying more sugary drinks from the kiosk. Both of these goals can be achieved through the King’s Centre’s social media presence.

The two social media platforms which are easiest to use and will target the largest audience are Twitter and Facebook. Managing accounts on these platforms is relatively easy. While Facebook pages and Twitter accounts can pay to be promoted on the site, the best engagement will come from having a well-designed page and getting promotion from other accounts. For the King’s Centre, the best kinds of promotion will come from ‘retweets’ and ‘shares’ from Oxford Brookes
University. Oxford Brookes’ Twitter account has 35,000 followers and they will presumably be happy to help promote healthy eating for their students in exam terms. In addition to this, the King’s Centre could offer small discounts on healthy products for those that follow them on Twitter and/or like their Facebook page and encourage students to share photos of their food.

The King’s Centre should focus on key messages such as its menus and posters mentioned previously. These should be posted before events and examinations to remind students to choose the snacks and meals they want. In addition, regular reminders should be sent out for students to bring their own water bottles. Retaining attention on social media can sometimes be a challenge but it need not be difficult. Generally, it is good to get a nice friendly feel of what is going on with regular uploads about activities and promotions at the King’s Centre. Posting photos of food and the preparation process is also very popular social media, and a great way to attract people to a page. When posting photos, the King’s Centre should emphasise the low sugar and healthy food and drink which will encourage students to order these options. There is no specific equipment required for this other than a basic smartphone.

With a SUGAR SMART focus to its social media presence, the Centre could begin to pursue options such as allowing students to pre-order food and drink by messaging their account. Furthermore, moving to other platforms such as Instagram which are especially popular for food can help promote low sugar options among students especially.

The principles outlined here are not exclusive to the King’s Centre but can also be used by others as part of the SUGAR SMART campaign, especially those who have a high number of customers who are students. The main points are as follows:

- Create social media accounts
- Encourage other institutions to promote your student-specific SUGAR SMART messages through their social media (especially Oxford Brookes in the case of the King’s Centre)
- Promote the menu and reminders to bring reusable water bottles
- Explore future options for taking orders and expanding to other Social Media Platforms

These points will help to reduce sugar consumption and promote healthier options, especially among the younger generations and students.

Examples of specific posts on social media:
Facebook is generally used for more formal messages than other platforms but still do not be afraid to add some character along the following lines:

‘Don’t forget your water bottle for exams tomorrow. You can get free ice-cold refills at the King’s Centre’.

(A photo wishing people good luck or of the Centre can be added to help you seem approachable.)

Good examples of social media engagement are Facebook posts from Jericho Coffee Traders (https://www.facebook.com/jerichocoffeetraders/)

Twitter is a good mix of formal and friendly. Posts that go on Facebook and Instagram can almost always go on Twitter too:

‘Check out your delicious #SugarSmartOxford options at the King’s Centre for lunch tomorrow! #FuelYourDay Here’s our menu: [attach photo of menu]

For good examples, it is worth looking at the All Nations Centre: (@AllNationsConf): https://twitter.com/AllNationsConf?s=09

Instagram is the most casual of the three suggested social media platforms so the focus is on photos - especially of people and food – without too much dense information.

‘Chef Max preparing today’s low sugar lunches! #SugarSmartOxford #lowsugar #FuelYourDay’ [photo from that day]

‘Enjoy some of our delicious sandwiches before or after your exams! #SugarSmartOxford #FuelYourDay’ [photo of sandwich]

For good examples, it is worth looking at the following account: https://www.instagram.com/stagcoffeecardiff/

2. Macro Level Analyses – How to Engage Oxford Student Community?

There are three broad opportunities for promoting SUGAR SMART initiatives with Oxford students:

- Engagement with students in JCR or MCR through offering a SUGAR SMART tuck shop
- College-wide engagement with students and hospitality staff through implementing SUGAR SMART initiatives in canteens, bars and halls
Department-wide engagement with students and third-party providers of food in Oxford departments through implementing SUGAR SMART initiatives in departmental canteens and bars

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<thead>
<tr>
<th>Level of engagement</th>
<th>College students</th>
<th>College students and staff</th>
<th>Departmental students and staff</th>
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<tr>
<td>Example of engagement</td>
<td>Tuck shop / student-managed bar</td>
<td>College canteen, hall and bar</td>
<td>Departmental canteen and / or bar</td>
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<td>Strategy for implementation</td>
<td>Partner with students as key change makers, who can introduce the Sugar Smart initiatives by cooperating with Health or Environment JCR and MCR representatives. Some colleges already have either tuck shops (shelf with drinks and snacks) or student-managed bars that can introduce some of the SS proposals.</td>
<td>Partner with students (primarily Health or Environment JCR and MCR members) or Oxford Student Union in order to raise awareness of the Sugar Smart campaign. The second step is for students to contact college staff (i.e. hall / hospitality manager) and suggest them to add Sugar Smart activities to the existing sustainability agenda.</td>
<td>Partner with students (departmental representatives to Joint Consultative Committee) in order to raise awareness and gain formal support from the department for approaching third-party food providers with the suggestion to implement SS initiatives.</td>
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</table>
| Top three suggested Sugar Smart proposals | - Traffic light system on menus 
Healthy options more visible 
-10p sugar tax on specific drinks | - Tap water as standard 
- Traffic light system on menus 
- Informative poster about importance of sugar reduction | - Traffic light system on menus 
- Informative poster about importance of sugar reduction 
- Healthier options more visible |
| Examples of good practice | Tuck shop in Oriel College | College-wide health and sustainability initiatives in University College / Merton college | Departmental-wide health initiatives in the Maths department / Blavatnik School |
Examples of good practice in photos:

1. Tuck shop in Oriel College
2. College-wide health and sustainability initiatives in University College

3. Department-wide health and sustainability initiatives in the Maths department / Blavatnik School / Social Science building
Set up a student-run Sugar Smart tuck shop:
- Set up a shelf with Sugar Smart drinks and snacks
- Provide a self-pay system (e.g., a list to record purchases and a box to have cash in)

Some ideas for items to fill the tuck shop with:
- Nuts, seeds and dried fruit
- Fresh fruit
- Pure fruit juices
- Sugar-free instant porridge
- Crackers
- Hummus
- Sugar-free, low-fat, low-salt yogurt

https://www.sugarmartuk.org/
Are you Sugar Smart?

The recommended daily allowance for sugar is 30g (7 teaspoons or cubes) for an adult.

It is easy to exceed this recommendation, as sugar loaded foods are easily available and seemingly convenient sources of energy.

How can I become more Sugar Smart?

- Avoid sugary drinks, and drink water instead (add a dash of lemon juice for taste, if you like).
- Read the nutrition label when buying food.
- Avoid foods high in refined sugar.
- Choose foods high in fibre and protein, and complex carbohydrates, that release energy slowly to fuel your day.

How can I make my environment more Sugar Smart?

- Approach your college or department and encourage them to make Sugar Smart changes.

Who to approach?

- Head of Environment representative of the JCR or MCR at your college
- The Joint Consultative Committee at your department
- The Oxfam Student Union
- Hospitality manager at your college or department

Suggestions for Sugar Smart changes:

- Make tap water easily available.
- Label foods according to traffic light rating (red/yellow/green)
- Make healthier options more visible.
- Introduce a ‘No sugar tax’ on sugary drinks.
- Display posters with information on the importance of sugar reduction.
Do you struggle to focus or stay awake after meals?

Sleeping through precious revision time?

Don't rely on caffeine!

Fuel your entire day:

- Choose foods high in fibre and protein that release energy throughout the day.
- Avoid foods high in refined sugars to prevent the immediate sugar crash.
Are You SUGAR SMART?

Foods high in refined sugars will send your blood sugar levels on a rollercoaster, putting your health at risk.

Choosing foods high in fibre and protein will keep you going throughout the day:

Blood Sugar Levels

1 hr 2 hr 3 hr

Hunger Zone
Student Consultants

Riccardo Casini

Riccardo Casini is a second year undergraduate studying Economics & Management at the University of Oxford. Riccardo is currently Treasurer of a sizeable fund at his Oxford College, which gives him responsibilities such as making decisions when evaluating spending choices, as well as reimbursing activities funded by the student body.

Huw Davies

Huw Davies is a second year Undergraduate studying Philosophy, Politics, and Economic at Oriel College. Recently having given up sugar, he takes a keen interest in how to improve public health through reducing its consumption.

Jure Juric

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Barbara Mahler

Barbara Mahler is a final year DPhil student in Mathematics. She works on using and developing methods from algebraic topology to study biological systems.

Rosie Munday

Rosie Munday is a second-year medical sciences DPhil student at the University of Oxford. She is working as part of the UK Cystic fibrosis gene therapy consortium to develop new viral vectors for gene delivery into the lung for the treatment of inherited lung diseases. Prior to commencing study at Oxford, she graduated from the University of Southampton with a Bachelor of Science in Pharmacology (first-class honours). Rosie is also a keen rower for her college (St Edmund Hall).