Remediating Paper Cup Wastage in the John Radcliffe Hospital: A Report to Medact Oxford

The Student Consultancy, Careers Service, University of Oxford

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30 November, 2016

Executive summary

Client situation

Medact Oxford wants to reduce the use of paper coffee cups in the John Radcliffe Hospital.

Recommendations

We recommend that Medact Oxford be in contact with the hospital Trust and encourage them to support this initiative. In addition, we believe reaching out to the hospital staff to raise awareness of the issue to be beneficial. Finally, we recommend promoting the 'Paper Cup Manifesto' among the Trust and the head offices of providers, many of which are signees of the Manifesto. We recommend these approaches for three reasons. First, we found that coffee providers at the hospital are in general quite receptive to becoming greener. However, we found that in order to achieve this in practice, a top-down approach from the head offices and initiatives, especially from the hospital Trust, is required. Approaching the Trust might help in persuading the providers, since the providers have a contract with the Trust. Second, most of the customers of the providers are hospital staff. We conducted surveys among the staff and found that consumer attitudes are not an impediment to implementing paper cup reduction schemes. In fact, most consumers demonstrate some environmental awareness and would welcome being steered towards usage of sustainable alternatives to paper cups. For example, enforcing a small charge on paper cups would likely lead to a decrease of their use. Third, while many of the providers have signed the Paper Cup Manifesto, none of their employees at the hospital had heard of it, and the goals of the Manifesto do not seem to be enforced in the outlets. The Manifesto and its signees are publicly available online. Thus, promoting the Manifesto would remind the head offices of the providers of their pledge and at the same prove good publicity should they follow. Finally, Medact Oxford might want to discuss the general recycling scheme of the hospital with the Trust. The current scheme needs improving according to some coffee vendors.



Dear Dr Lazarus and Medact Oxford,

It has been a pleasure to work with you on this exciting project of analysing the means and challenges of reducing paper coffee cup usage at the John Radcliffe Hospital. In this report, we present the results of our research and analysis. We begin with a brief description of the overall aim of the project, the anticipated challenges, and how we structured our approach to the problem. We then proceed to outline some recommendations of next steps Medact Oxford might take in advancing its mission. We support our recommendations with the key findings derived from the data that we gathered through our research.

The Challenge

An estimated 2.5 billion paper cups are used every year for the consumption of hot drinks in the UK. This equates to roughly 7 million per day, or 10,000 cups every two minutes. Of this colossal usage, only 1 in every 400 cups is currently recycled (or 0.25% of cups)¹. The remaining paper cups go to landfill.

Most commercially-used paper cups (e.g. from popular, high street coffee vendors) display a "recyclable" logo. This label tends to be misleading, applying only to the paper sleeve on which it is printed; in actuality, the cup itself is seldom recyclable. This is because these cups tend to be composed not just of paper, but rather of mixed materials. The paper component is bonded to a plastic inner lining, in order to make the cup waterproof. There is currently just one recycling plant in the whole UK willing and able to recycle these complicated products (see simplycups.co.uk). However — perhaps because these paper cups are, in principle, recyclable — the reality of low recycling rates does not seem to be common knowledge amongst consumers of hot drinks.

The lack of paper cup recycling is rapidly becoming a sustainability issue for the coffee industry in particular. As an attempt to address this problem, the Paper Cup Manifesto (see <u>foodservicepackaging.org.uk</u>) aims to improve sustainable use and recycling of paper cups at all levels of the manufacturer-to-consumer chain. However, larger institutions, such as the focus area, the John Radcliffe Hospital (JRH), are still seeing extensive usage of paper cups in their hot drink supply. Further, our investigations revealed that most people, including the managers of commercial coffee vendors within the JRH, are largely unaware of the issues regarding recycling of paper cups. Most of the respondents in our survey research had not heard of the Paper Cup Manifesto. Targeting paper cup usage within the JRH specifically is a challenge because hot beverages are available to consumers from a number of different outlets scattered around the large site. These outlets, operating under individual contracts from the IRH Trust, have



different business models, and have differing levels of autonomy in terms of their day-to-day operation.

To investigate strategies for reducing the environmentally unsustainable use of (unrecycled) paper cups within the JRH, we have explored hot beverage sales at both the consumer level, and the commercial vendor level. Consumer coffee consumption and paper cup usage was investigated using in-person surveying at the JRH. Coffee vendor provision was researched through in-person interviews with site managers at the JRH. This report is divided into two main sections to reflect this division, followed by our conclusions and recommendations for actions Medact Oxford might take towards reducing the usage of paper cups within the JRH. This split allows us to better understand the issue from all aspects and viewpoints, and to make supported and more feasible recommendations.

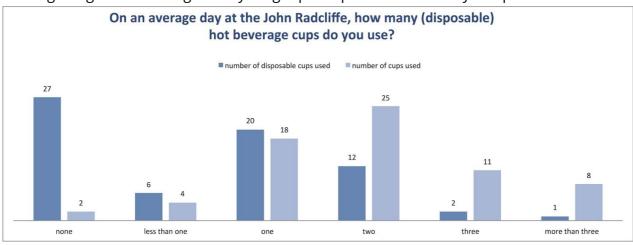


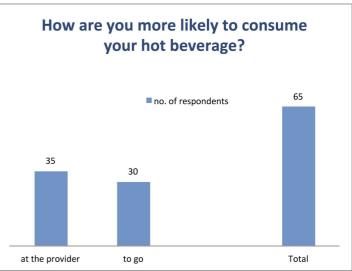
Consumer paper cup usage within the JRH

Key Insights from Consumer Surveys

Attitudes and habits regarding reusable and disposable paper cup usage are mixed.

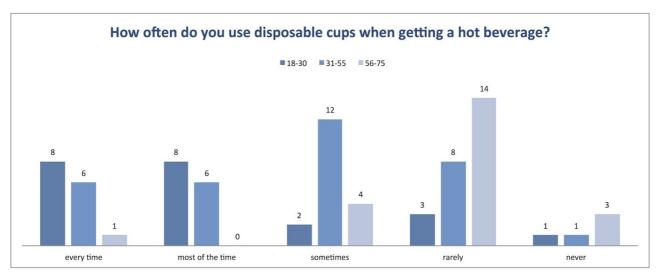
- "At the provider" or "To go": 54%
 prefer to consume their hot
 beverage at the provider as opposed
 to 46% who prefer to consume their
 hot beverage to go.
- Frequency of use of disposable cups:
 Only 6% never use a disposable cup when purchasing a hot beverage, 21.5% rarely use a disposable cup, 28% sometimes use a disposable cup, 21.5% use a disposable cup most of the time, and 23% use a disposable cup every time.
- Number of disposable cups used per day: On average, participants use 2 cups for hot beverages per day, 1 of which was a disposable cup; the number of cups used per day varied between 0 and 8, while the number of disposable cups used varied between 0 and 7 per day this means that the 67 participants use around 422 disposable cups per week.
- Demographics: Age turned out to be the only meaningful predictor of both preference for disposable vs. reusable cups and in the frequency of use of disposable cups; the older the participant, the less they liked using disposable cups; by and large, older participants use disposable cups less frequently when getting a hot beverage than younger participants in the survey sample.











Consumers' top hot beverage criteria do not stand in the way of more sustainable usage behavior

When asked to rate the personal importance of a set of criteria when consuming hot beverages on a scale of 0 (not at all important) to 3 (very important), participants rated "quality" to be the most important, followed by "location/convenience" and "service". "Price", "variety of choice", and "atmosphere" were considered to be only slightly to fairly important. The ordering of these criteria shows that as long as the quality of drinks is good and consumers do not have to go out of their way to obtain a hot beverage, other criteria (including prices) are of secondary importance and will not greatly influence consumer choices. If hot beverage providers at the JR Hospital were to make a slight change to pricing schemes, in order to steer usage away from paper cups while



maintaining the quality of their products, this should not be expected to reduce consumption levels. In fact, some respondents highlighted their preference for the "choice of having coffee in a china cup".

Consumers that prefer reusable cups demonstrate high environmental awareness

More than half of all respondents indicated an explicit preference for reusable cups. The vast majority of their responses can be placed into two categories, these being: 1) environmental concerns; and 2) a preference for drinking from a china cup or their own reusable cup. For the former, 22 out of the 35 respondents (63%) who preferred reusable cups for environmental reasons also made an explicit reference to the environment. Commonly-expressed sentiments include, "concern for the environment", "environmentally friendly" and "saving the environment".

Many consumers find that reusable cups offer a more pleasant consumer experience

The respondent group preferring to drink from a china cup or other form of reusable cup indicated diverse reasons for their preferences. The question was answered in one of three ways: 1) by referring specifically to china cups; 2) by referring specifically to their own reusable cup (e.g. a Thermos flask); and 3) by referring to the general idea of a reusable cup, without specific reference to a specific type. Although these different answers represent a range of viewpoints, for the sake of analysis they can still be categorised broadly. 11 of the 35 respondents (31%) had reasons related to the better consumption experience of drinking out of a reusable cup. These include: the hot beverage tasting better; the experience generally being nicer and more relaxing; and respondents themselves being accustomed to sitting down and drinking a hot drink as opposed to doing so on the move. Quotations supporting this were generally simple but illustrative, such as "tastes better", "they're more pleasant to drink from" and "prefer drinking from a proper cup".

If paper cups are preferred, this is typically for pragmatic reasons — paper cups are not favored per se

Of the 67 participants, 27 (40%) expressed a preference for disposable cups. The reasons given largely had to do with convenience; reasons not having to do with convenience fell into two categories.

Of those preferring disposable cups, 19 (70%) did so for reasons of convenience. These reasons can be broken down further, with the majority either: 1) definitely needing their coffee to take away; or 2) being generally unsure whether they will finish their coffee sitting down, and so using a disposable cup to allow for contingencies. Respondents giving these answers tended to be staff members, which goes some way in explaining



why they are more likely to be mobile when consuming their coffee. The main describing words used were "convenience" and "ease", with a couple of responses noting that for safety reasons they were required to have a lid on their beverage container (in which case a paper cup would be the most practical option).

The other two reasons, making up the rest of the responses, can be grouped into hygiene concerns and not being offered a reusable cup. The hygiene concerns centred on the JRH being a hospital environment (i.e. one with sick people) and therefore calling for a more cautious approach to cup choices; others reported concerns about the cleanliness of the outlets themselves, with one respondent citing an instance of being given a dirty china cup. Of these respondents, 4 of 27 (15%) claimed that they were never offered the choice of a reusable cup, and that they therefore took the disposable cup as the default option.

Consumers, especially members of staff, also indicated a general preference to take their hot drinks breaks at the provider rather than "to go". Phrases used include: "to take a break from hospital environment", "part of the break", "I prefer taking breaks properly". Again, some respondents mentioned that they prefer to have their hot beverage at the provider, either because they specifically prefer "china mugs to paper cups", or because they like to sit, or because they want to enjoy the social café environment. Those respondents who opted for "to go" as their preferred hot beverage consumption style provided very specific reasons, none of which included a preference for paper cups per se. More than 60% of the respondents indicated "busy", "lectures" or "work" as their main reason. Similarly, a number of respondents wanted to "move around" with their hot beverage. Other consumers mentioned a need for "quiet time" as their main reason not to consume their drink at the provider.

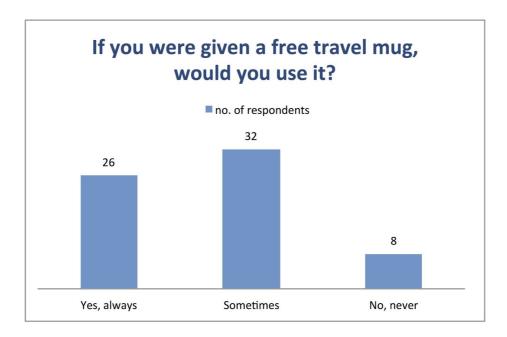
While these customers would be negatively impacted by an extra charge on paper cups, their answers do not suggest that being offered alternatives, such as travel mugs or reduced prices for bringing one's own mug would be in contradiction to their consumption preferences.

Free reusable mugs would reduce paper cup usage

The most popular category of response was that respondents would use a reusable cup whenever they had one to hand. Here, respondents commonly reported a mnemonic problem with reusables — that is, they would not always remember to bring one when going to the JRH. Around 20% of respondents suggested that either the provision of travel mugs or incentives for bringing one's own reusable cup could have traction. Phrases such as "if I remember to bring it" and "if I brought my own" were common. The second-largest category, containing around 15% of responses, was that they would use a reusable mug: 1) when they knew that they would definitely either be in a rush — and therefore unable to be sure that they could consume a hot drink sitting down; or 2) when



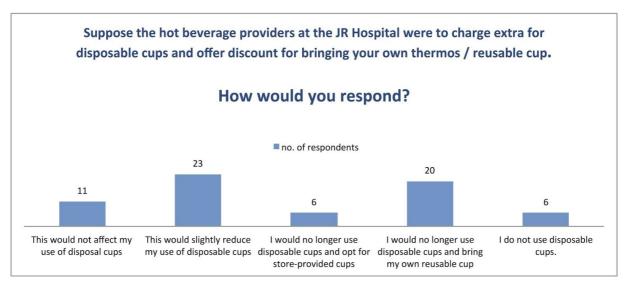
they knew that they would definitely be on the go. Again, this is something that suggests providing travel mugs or incentivising their use could work among certain groups of hot beverage consumers, particularly staff. This would help also to alleviate concerns expressed by a handful of those surveyed about the provision of china cups, in that they were willing to use a reusable cup but had hygiene concerns about ones provided by the coffee providers. This was either for reasons related to it being a hospital environment in general, or previous experiences with unclean china cups at coffee outlets.



Charging for paper cups would also reduce usage

Finally, participants were asked to say how they might react if hot beverage providers at the JRH introduced a charge for disposable cups and offered a discount for bringing one's own reusable cup (thermos). 75% of those asked said that a charge would reduce their paper cup usage at least somewhat, with half of these saying the policy would "slightly" reduce their usage and 40% saying the policy would reduce their disposable cup use entirely. Among this 40%, opinion was split between then: 1) opting for a store-provided cup; and 2) bringing one's own reusable cup, with the majority preferring the latter option. This adds further support to the previous point concerning the provision of travel mugs in the hospital. In the survey's section for additional comments, it was expressed that "I would bring my own mug if it was cheaper", suggesting that there is real potential in the idea of introducing a charge for paper cups.







Commercial vendor paper cup usage within the JRH

Usage of disposable paper cups is unevenly high within the JRH

What commercial coffee vendors currently exist within the JRH?

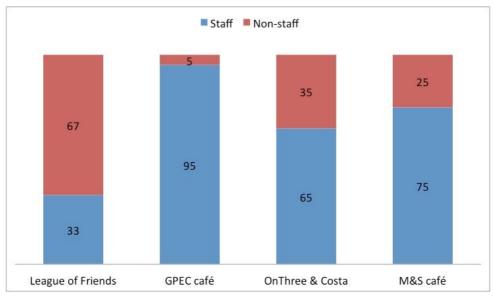
- ❖ League of Friends café (LF); manager David Simpson.
- ❖ George Pickering Education Centre (GPEC) café; manager Victor Poor.
- OnThree, canteen area and separate coffee stand supplied by Costa Coffee. The OnTwo commercial area is now permanently closed.
- Marks & Spencer's café (M&S).
- Pret-A-Manger café (PM).
- ❖ A number of automated machines: Nescafé within WHSmith; Douwe-Egbert near League of Friends café, and within OnThree; one within OnTwo vending space.

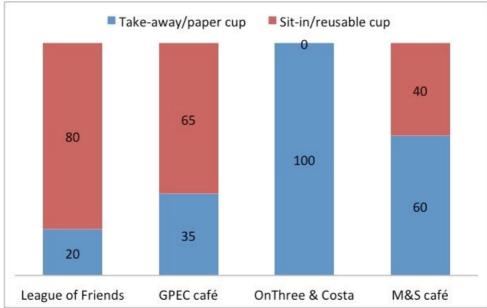
Paper cup usage data

- League of Friends café
 - ➤ Customers: 1/3 staff
 - > Sit-in: 80% customers
 - ➤ 60 paper cups/day, 20 polystyrene/day
 - > 20% of their profit comes from coffee served in a disposable cup
- ❖ GPEC café
 - ➤ Customers: 95% staff
 - > Sit-in: 60-70% customers depending on busy-ness
 - > 1000-2000 paper cups used per 2 weeks, depending on busy-ness
- OnThree café
 - > Customers: 65% staff, 25% visitors, 10% patients
 - Sit-in/takeaway [inconclusive]
 - ➤ 2000 paper cups/week
 - All coffee is served in paper cups (notably within the area supplied by Costa

 Costa Coffee do not provide any porcelain cups to use; but cups in canteen area are biodegradable)
 - > 10p charge on the paper cups included in the price
- Marks and Spencer's café
 - ➤ Customers: 75% staff
 - > Sit-in: 40% customers
 - Paper cup usage [inconclusive]
- Pret-A-Manger café
 - > Did not respond to attempts at contact







Identified barriers to reduction of disposable coffee cups within the JRH

- Safety aspects breakages and spillage within the hospital, meaning a lid is required (OnThree)
- No capacity to wash greater numbers of porcelain mugs (OnThree)
- Numbers of stolen porcelain mugs (LF, OnThree)
- Convenience for till staff, particularly during busy periods (applies mainly to M&S, PM)
- Not provided, full stop (OnThree)



- Presence of automated coffee machines
- Lack of knowledge regarding the issues with disposable coffee cup recycling, and ignorance of the *Paper Cup Manifesto* (all)

Usage of coffee cups also affects commercial vendors

Smaller commercial vendors (GPEC, LF) expressed their preference for porcelain cup usage. This seemed to be due to differences in VAT charging, however VAT is chargeable in the UK on served hot beverages regardless of location of consumption (see UK Gov VAT Notices 709/1 & 701/14). These vendors also noted they preferred serving hot beverages in porcelain cups due to their relative ecological sustainability, although for the smaller vendors (mainly LF) thievery of mugs and the resultant raising of their overhead costs warranted consideration. However, the LF and GPEC were happy for consumers to bring their own reusable mugs to purchase coffee.

Targeted advertisement and adaptation of sales staff behaviour may reduce disposable cup usage

Commercial coffee vendor locations within the JRH do not currently use targeted advertising either to promote sustainable porcelain cups or to encourage customers to consider their environmental impact. Similar to recycling systems within other institutions (e.g. University of Oxford), targeted signage can inform the public, thereby helping them to make more sustainable choices. Some vendors (in this case OnThree, M&S, PM) may be subconsciously promoting paper cups by stacking these in view of the customers, by the till or coffee machine.

However, this aspect of our research indicated several significant barriers to promoting coffee-drinking sustainability within the JRH. For larger commercial vendors (OnThree/Costa, M&S, PM) advertising is decided on and provided by the head-office, and so in these areas sustainability marketing is unlikely to influence disposable cup usage. It may be possible to persuade these vendors to alter the placement of these cups, but again, it may be that such a change would be overly inconvenient or not at the discretion of branch managers.

Finally, all interviewed commercial vendors noted that their till staff are trained to ask each coffee consumer whether they are consuming their coffee on the premises or require a disposable takeaway cup. This is considered a positive steps towards greater sustainability throughout the JRH, although it was noted, through direct, on-site observation in some of the chain vendors, that in practice this policy of enquiring with the customer is not always followed. In particular during busy times staff seemed to find this difficult to maintain, due to the convenience of paper cups.



Substantial initiatives towards reduction of paper cup usage requires pressure on coffee vendors from the JRH Trust

In matters of day-to-day operations, all commercial coffee vendors reported a relatively high level of autonomy, excepting broader-scale controls from head-offices (for OnThree, M&S, PM). There was some interest expressed, by managers, in implementation of initiatives within the JRH to reduce the usage of disposable cups. The managers at the LF and GPEC responded very positively to introducing a nominal charge for take-away cups, which would be similar to the model used within the UK for plastic grocery bags². However, they noted this scheme would only be successful if the JRH Trust made this a provision in contracts for commercial beverage vendors. Inconsistent enactment of such a policy would create unhelpful competition amongst the vendors. The OnThree canteen area noted they already charge for a paper cup for water, and that a charge is also "included in the cost of the coffee". M&S staff had no opinion on introducing a paper cup charge, as pricing is set through their head-office; in these scenarios, implementation of this scheme may require negotiation between the JRH Trust and relevant companies.

The vendors also expressed the opinion that within institutions like the JRH, and commercial organisations generally, it is impossible to entirely eliminate paper cup usage. Due to this situation — i.e. the top-down control from head-offices on many of the vendors, and the use of different paper cup suppliers across vendors — in the long term, the issue might best be tackled by looking at sustainable versions of disposable cups. For example compostable cups (e.g. vegware³, used for this reason by the University of Oxford Department of Zoology), or cups with a separable plastic liner (e.g. Frugalpac⁴, being trialled by Starbucks⁵). The challenge in this case would be to persuade the JRH Trust to implement this within their sustainability strategy, and exert pressure on the commercial hot beverage vendor contracts to utilise cups constructed of more environmentally-friendly materials.

Recycling at the John Radcliffe Hospital is unsorted and inefficient

While not directly bearing upon the issue of high disposable coffee cup usage at the JRH, it is worth noting here that the general recycling scheme appeared to be an area where change could bring about significant increases in environmental sustainability. All interviewed commercial coffee vendors at the JRH noted that their recycling is either placed by customers into general recycling bins or packed and given directly to the JRH caretakers. All vendors believed the JRH performs no separation of recycling prior to removal from the JRH site. Further, some communal commercial areas within the JRH did not have recycling bins, or these were implemented very recently by commercial outlet staff (e.g. via the manager of GPEC). In addition, commercial vendors were, generally,



unaware of the issues surrounding disposable coffee cup recycling, and none had heard of the *Paper Cup Manifesto* (see foodservicepackaging.org.uk).

Mixed recycling is more inefficient than separated recycling, in the long-term (while initially convenient, it leads to greater economic costs; Container Recycling Institute⁶). However, managers at some of the hot beverage outlets found the idea of separated recycling bins within the JRH desirable. We recommend considering lobbying of the trust to implement sorted recycling bins for JRH patrons/staff to use. This would help to advance the message of environmental sustainability within the JRH, and improve compliance with the UK governmental guidelines on collection of waste⁷.



Our Recommendations

Main points

Coffee cup wastage happens in a context of institutional rules and social behaviours. Thinking about how best to mitigate the practice, therefore, will target both 1) the administrative and 2) the cultural.

1) The JRH Trust will be an essential ally for any action with meaningful and long-lasting success.

The different venues at which coffee is available in the hospital vary enough in their business models that any across-the-board policy will need to come from above. Medact Oxford's efforts will be most efficiently and effectively allocated, therefore, in lobbying the JRH Trust Board, rather than in approaching vendors individually. In particular, this includes possible future actions towards introducing a small charge for paper cups at coffee vendors, or the availability of travel mugs. While the evidence supports a positivity in the JRH towards these ventures, they necessitate Medact Oxford working in conjunction with the Trust.

Furthermore, excessive and avoidable paper cup wastage in the JRH might be portrayed as an "easy ask" issue, if it is strategically juxtaposed to the much larger problem of the JRH's deficiency of provision for recycling generally.

2) Our survey of the hospital's hot beverage consumers revealed quite positive attitudes towards efforts to reduce the problem of beverage cup wastage (managers and employees of vendors also showed some positivity to reducing wastage generally). Therefore the hospital population, in terms of regular occupants as well as of occasional visitors, is likely to be receptive to organised "interventions" in the JRH's institutional culture.

It may be effective, in particular, to raise awareness in the JRH generally that OnThree (/Costa) has no non-paper-cup options, and that because this is a consequence of their business model the situation is very unlikely to change without intervention from the JRH Trust. Therefore, if OnThree (/Costa) were going to become greener, the initiative would need to come from beverage consumers themselves. The logical proposal along these lines would be for beverage consumers in OnThree (/Costa) to use only reusable thermoses/cups whenever possible. Medact Oxford may want to consider launching a campaign to promote this practice; we advise that the JRH provides a promising environment for such an initiative. Social attitudes towards environmental responsibility tend to be positive. It is true that hot beverage consumers who take it upon themselves to ensure the availability of reusable cups may, in certain respects, be accepting a



pragmatic burden. But the perception is likely to be, widely, that the costs of time and energy are compensated for by tangible and intangible benefits. The value and the motivating force of intangibles — such as improved self-perception and a sense of having fulfilled behaved ethically — should not be discounted.

If such a campaign were undertaken, it might involve increasing the accessibility, within the hospital, of reusable beverage containers, either for sale or short loan.

It is possible that vendors could become useful allies in a campaign to increase the normality of reuseable cup usage. But it is unlikely that such a partnership would gain any real traction if it were not first demonstrated that the idea held appeal among beverage consumers.

Other points

3) The Paper Cup Manifesto represents a ready-made tool and template for broaching discussion of the paper cup problem.

The details of the Manifesto are not necessarily as important as the pragmatic value it provides in the form of a ready-to-hand referent. In other words, it provides a kind of conversational 'platform', upon which the subject of paper cup usage can be effectively broached. Although many of our respondents, both those among beverage consumers and among vendors, were unaware of the Manifesto, it was observed generally, among both types of respondent, that mentioning the Manifesto was as effective way of grabbing an interlocutor's attention.

The Manifesto represents a context of broader relevance and suggests the normative nature of reducing paper cup usage.

4) Looking beyond immediate steps, there are issues on which Medact Oxford may wish to do further research.

The most obvious of these would have to do with the possibility of JR beverage vendors using cups of environmentally more ethical materials. Disposable cups themselves will not disappear from the Hospital anytime soon; but the levels of waste that the cups produce can be controlled by simply targeting cup supply. At the level of culture and mentality, beverage consumers might be primed to accept the introduction of cups of a lower quality (for instance, ones that feel flimsier) if they expected the change also meant that in the process their own environmental habits were being improved. Vendors may have some receptivity to changing their own supply chains (to providing biodegradable or more easily recyclable cups), but — to repeat for emphasis — lobbying the JRH Trust to



mandate such a policy in vendor contracts would be the most efficient use of Medact Oxford's time and resources. This, again, may be presented as an "easy ask" possibility for the Trust, as implementing regulations that were slightly inconvenient to vendors but 'morally obvious' overall would be far easier than overhauling the JRH's quite deficient recycling provision.

References

- ¹http://www.telegraph.co.uk/news/shopping-and-consumer-news/12194148/Coffee-chains-accused-of-making-false-recycling-claims.html
- ²https://www.gov.uk/government/publications/single-use-plastic-carrier-bags-why-were-introducing-the-charge/carrier-bags-why-theres-a-5p-charge
- ³http://www.vegware.com/index.php?act=viewCat&catId=4
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- ⁵https://www.theguardian.com/environment/2016/jul/21/starbucks-trials-recyclable-cups-in-move-to-tackle-landfill-waste
- 6http://www.container-recycling.org/assets/pdfs/reports/2009-SingleStream.pdf
- 7 https://www.gov.uk/guidance/separate-collection-of-waste-paper-plastic-metal-and-glas ≤

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