

# Innovating for Improvement

## Cardiologist's Kitchen Initiative: targeted dietary and lifestyle interventions for hypertension

The Royal United Hospital Bath NHS Foundation Trust



## About the project

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### **Project title:**

Cardiologist's Kitchen initiative (CardioKIT) – targeted dietary and lifestyle interventions for hypertension via modern communication strategies

### **Lead organisation:**

The Royal United Hospital Bath NHS Foundation Trust

### **Partner organisation(s):**

Bath and North-East Somerset Clinical Commissioning Group

Public Health Bath & North-East Somerset

### **Project lead(s):**

Dr Ali Khavandi

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## Part 1: Abstract

Hypertension affects a third of the adult population and is now the main risk-factor leading to death in the UK. Part of a growing trend towards premature 'metabolic' conditions, driven by diet and lifestyle, hypertension costs the NHS over £2billion every year. Related metabolic conditions such as type 2 diabetes cost £14billion per year and now equates to 10% of the NHS budget. These conditions have traditionally been medicated but since the modern demographic is related to lifestyle, is there a better way to address this growing health challenge?

CardioKIT is an innovative approach to these conditions by focusing the intervention on diet and lifestyle at the point of diagnosis but also by using attractive engagement and behavioural techniques observed from the media and marketing industries.

We have some inspirational patient stories from the last 12 months with conditions that would normally be labelled as 'chronic' resolving and medications reducing or stopping. The process is different from traditional healthcare but the project has shown that this style of approach should be the new standard.

The main challenge to innovation and change has been the historical NHS structure, systems and current financial pressures. The key to success for us has been the strength and passion of our team and development of a wider network.

CardioKIT is in a transitional phase and will require bridging funding. It is clear to us that the best path for long-term success will be implemented through the NHS but incubated and run through an outside partner.

## Part 2: Progress and outcomes

The Cardiologist's Kitchen initiative (CardioKIT) is an innovative approach to high blood pressure treatment and an innovative approach to patient engagement at the point of emotional buy-in from within healthcare. The project targets patients directly to encourage 'self-help' through modern communication and engagement to encourage dietary and lifestyle changes.

Patients' are engaged through two primary channels; a physical 'CardioKIT' pack via a healthcare professional at the point of review (which contains information and incentives) and direct modern media communication. These then trigger a pathway of recycling touch points through a central digital platform. Ongoing engagement in the process is encouraged through attractive information such as special recipes or incentives such as links and offers to local food producers/ outlets. This is all supported through regular communication via newsletters and social media which feel personalised.

The project has followed the original plan without any adjustments. Although hypertension remains at the centre of the project we have broadened the offering to the full range of metabolic conditions including type 2 diabetes and atrial fibrillation, in response to our patient experiences.

We have demonstrated the potential to capture a large volume of data. The initial intention was to follow the template of a traditional study (with a control and detailed quantitative analysis of outcomes) but it became clear early on that within the format of this innovation project the resources required would be unrealistic. This would require a parallel research team. Successful engagement, particularly through our GP partners also required that the patient pathway did not involve additional work by the clinician to document data in an already stretched consultation window. The whole premise of CardioKIT is to reduce the burden (both resources and financial) on healthcare systems.

In parallel, the other observation that was immediately obvious from an early stage were the inspirational patient stories that were coming out on a daily basis. Anecdotally we could see the benefits – as well as blood pressure other risk factors improved (Type 2 diabetes, high Cholesterol and Atrial Fibrillation), often medications stopped and patients were reporting a universal improvement both physically and psychologically above and beyond the isolated risk factors.

One of our fundamental goals was to create impact and dissemination within the community by using modern media. This was achieved throughout the project with stories in the national press (Observer Food Monthly), national and local radio stations (BBC Radio Bristol, Radio 4) and local television. Interaction with media professionals and outlets made it clear that the most successful stories have a 'hook' or personality element that will engage the public. We found implementation of this strategy to be very restrictive when applied through official healthcare bodies and this was a challenge (and a major learning point for the NHS). Dissemination and impact was complemented by frequent presentations at meetings, conferences, educational events and regular workshops for key stakeholders ranging from

patients to healthcare professionals to food producers. We have included and summarised our feedback from these events (Appendix 1).

With advice from our Health Foundation Consultant we decided that case stories were more in keeping with the modern style of the project and this first phase of implementation. Although this is not a scientific or quantitative analysis of impact, in many ways it provides a much more accessible format to understand how the project has touched the lives of the patients involved. We have captured 50 case stories from patients which are anonymised and are being displayed live on the web site ([www.cardiologistskitchen.com](http://www.cardiologistskitchen.com)) to inspire others and this data is included in Appendix 1.

Here are some typical examples of our case studies:

*“My blood pressure, from being 170-180/95 mmHg is now 125/75 mmHg and on good days can be 116/65 mmHg. I have followed your principles (and many recipes) for a year now and my weight has gone from 19 1/2 stones to 15st 10 lb and my waist from 44" to 36".”*

*“A year ago, my BP was dangerously high - it is now below 120/80! Also, I have lost 3 stone 7 pounds in 10 months.”*

*“I have lower blood pressure but most significantly my HbA1c has gone from a concerning 88% to a 58%, moving towards being considered no longer Diabetes Type 2 ... now 46%!”*

*“I am now fitter than I've been for many years and lost 5 stones in the first 5 months with a more gradual 5 lb loss since. My waist went from 48" to 32" and I am now size 'small' in most items. It has cost a fortune in new clothes! ... My cholesterol at my last test 6 months ago was 3.0.”*

*“Over the space of 3 months my cholesterol reduced from 5.5 mmol/l to a healthy profile of 3.2 mmol/l. By following Cardiologist's Kitchen advice, I managed to avoid needing to be prescribed statins by my GP.”*

Going forward we have established a rich substrate for parallel quantitative research but this would require dedicated resource and for the term of this project the main energy was invested in implementing the clinical plan.

Our final observation has been a culture shift within the wider team and hospital. This has raised awareness and enthusiasm to discuss these issues with patients and direct them towards a trusted resource. Therefore, not only does it appear to empower patients to self-help, it also provides a platform, publicity and confidence to encourage healthcare professionals to have these important conversations with patients.

### Part 3: Cost impact

Hypertension costs the NHS over £2billion every year. Increasingly this is seen as part of the spectrum of related metabolic syndrome including type 2 diabetes which costs the NHS £14 billion per year and now equates to 10% of the NHS budget for England and Wales.

Although the current healthcare strategy for these conditions is pharmacological, these are increasingly dietary and lifestyle conditions. As a local proof of concept innovation project, we have shown significant impact in these conditions when patients are engaged directly and supported through CardioKIT, often with a reduction in medication burden.

The focus of our project has been application and therefore detailed cost analysis has been beyond the scope of resource. However, since the cost and resource implications of the project are relatively modest in healthcare terms it would seem clear that as long as we can continue to demonstrate impact, in comparison to the current treatment and cost models of these conditions, a financial advantage is obvious. This advantage would multiply with growth and spread as in the context of a digital offering the resources would not need to increase proportionally.

To sustain or grow our project will require further investment. At a local level to sustain in its current format, following the major implementation investment from the Health Foundation, this will simply require maintenance investment in an ongoing project manager. Investment for growth would principally be driven by an increase in team member resources as phase 1 has been achieved with a 1.1 full time equivalent team. The next iteration would benefit from dedicated team members for digital maintenance and evolution, content management and communication/engagements (across patients, healthcare professionals and commercial partners). Man-power resource has been our main limiting factor for growth but a huge amount has been achieved and demonstrated as proof of principle already.

The ambition of CardioKIT remains to become self-sustaining but the project has not reached critical mass yet and immediate evolution beyond this initial 12 months will be crucial. Currently for continuation or spread we would remain dependent on funding from an external body.

## Part 4: Learning from your project

We are proud of what we have achieved, thanks to the support of the Health Foundation, with some inspirational patient stories. The project has closely followed the original plans and achieved the implementation mile stones as planned. However, the two areas which were ambitious and have proven beyond the scope of the first year have been detailed research-quality (quantitative) data capture/ analysis and the achievement of critical mass which triggers a self-sustaining growth phase for the project without the need for further external financial support.

The key element for success has been the selection of team members and collaborators. At the centre of this was the appointment of our phenomenal project manager which in retrospect was the fundamental variable. This was challenging due to the required timeframe between confirmation of the award and the process for advertising and appointing in an NHS organisation. All other elements for our project were built on the strength of our project manager and the parallel passion of the project lead.

The second important variable was selection of collaborators/ partners and this can be difficult within the timeframe of the project because usually you will only realise the quality of the contribution once a commitment has been made. Our advantage was that a strong network already existed that could be drawn on but the due diligence in contributors was vital.

The predictable risks for our project were the scale of ambition within the timeframe. The pressure to reach a self-sustaining threshold within 12 months were always apparent as were the resource implications of implementation in parallel with data collection within the context of this first phase. Very early in our project, despite the potential to access a wealth of data, it became clear that a traditional research element to the project would be unrealistic. We were effective in identifying this early on and in discussions with our Health Foundation Consultant agreed that the patient stories and case studies would be more in keeping with project.

We had anticipated the clinical pressures on general practice in the planning of the project and the need to engage with primary practice partners without imposing additional resource burden. This was apparent during the project and so one of the key elements for buy-in was to continue to emphasise that the project was designed to reduce resource requirement at the point of patient engagement.

The biggest single challenge to the project was, unfortunately, the NHS structures which are a continued source of inertia and barrier to efficient change. These were at times frustrating and difficult due to historical process which ultimately is a challenge to innovation (doing things differently). This ranged from logistical issues such as access to the award funds, the availability of supporting resources in the context of current pressures and difficulties implementing change due to the layers of management.

Communication from within the NHS was another challenge. A key factor for our project was to learn and emulate the engaging communication styles of the media



and marketers. We had learnt strategies of behavioural engagement directly from these industries but we found it difficult to implement these styles through the traditional healthcare communication routes which are more conservative. As a result, some promotional opportunities were lost. This is potentially one of the reasons why our patients are more likely to be engaged by a glossy magazine or food industry advert than comms through the NHS.

Our conclusion unfortunately is that the NHS structure is currently the biggest single barrier to innovation. In parallel our close engagement with local Clinical Commissioning Groups (CCGs) has made clear the scale of financial challenge faced by commissioners and the difficulties they are facing with maintenance of existing services. Although innovation projects such as ours are designed to provide longer term cost saving, our perception is that the current challenges are too distracting for the CCGs to consider additional investment in new approaches and the immediate focus is short term survival.

The feedback received from patients has been universally positive. In fact, the stories which are emerging are some of the most inspirational seen in our medical careers and really highlight both the physical and psychological impact to patients who feel empowered to take control of their own health. The feedback from healthcare professionals and physicians has also been very positive but there is still a perception, particularly amongst some physicians, that dietary and lifestyle interventions are not robust treatments. This is important because the communication of the project at the point of engagement has a strong influence on the patient's level of subsequent engagement.

What we have learnt from our project is that the ideal model for us would be to drive innovation that is implemented and supported through the NHS but coordinated from the outside to be free and have autonomy of the current barriers and inertia. For innovation to sustain, at least initially, increasingly projects will have to find sources of funding from outside of the NHS and we have always anticipated partnerships or other revenue models. The current pressures and culture of the NHS will mean that innovation projects will better incubate and mature outside of the organisation (rather than evolve from within) before there is potential to sustain from within the NHS. The threat then is that successful initiatives will deviate from the NHS into a commercial pathway and will require additional investment to 'buy back' into the NHS.

Our summary advice to other successful projects would be to reflect very early on in the implementation phase, particularly as the time-lines are tight, on realistic strengths and challenges. Focus on the strengths and revise expectations of challenges with the support of your Consultant to stack things in your favour. You are under significant time pressure at the beginning and you will find the time-lines do not correlate with NHS expectations of process. Focus attention on appointing your project manager immediately, if appropriate, and chasing internal finance to coordinate access to funding. Diplomatically navigate the barriers within the NHS and engage with key influential stakeholder to encourage as much support and resource as possible. Management of perceptions is key and although innovation will always entail doing things 'differently' the NHS system will be more supportive if you can mould perception to fit within the priorities and protocols of the organisation. Although this may frustrate you need all the help you can get.



## Part 5: Sustainability and spread

At the end of the 12 months Health Foundation funding the project has come to a cross roads and there is a risk to sustainability. The original goal was to establish proof of concept, reach a critical mass and attract the support of a large partner organisation that would facilitate spread. We have proven the concept but the project will now require a period of consolidation to establish its direction. There are a number of positive discussions evolving.

We have generated a huge amount of interest and developed an eclectic network. There has been an extremely active dissemination strategy with frequent invites to speak on the subject or launch events. These have included:

- Media outlets including local television, BBC radio (local and national), national press
- Discussions at STP (Sustainability and transformation partnerships) level, hospital executive boards, public health meetings, Clinical Commissioning Group meetings (including an opening presentation for the annual general meeting)
- Presentations to healthcare professionals – educational events both in primary practice and hospitals
- Launch of the North Bristol NHS Trust Herb garden with Jekka McVicar
- Meetings and discussions with large corporate food industry at high executive level – Innovation CEO Kerry Foods, Director of Sainsbury's brands, Head of ambient food Tesco
- Frequent networking with local food heroes in the South West and presentations at events
- Presentations at local schools
- Invited speaker at national and local lifestyle medicine conferences
- Ongoing interest and discussions with the President of BACPR (British Association for Cardiovascular Prevention and Rehabilitation)
- We have run frequent workshops within a local farm shop combining food and health. These have been very popular and emerged as one of the real success stories of the project for patients. Sainsbury's have requested to attend any future workshops as they are interested in the concept.
- We have actively utilised social media platforms
- We now have an active network of healthcare professionals nationally who are passionate about dietary and lifestyle intervention

There has been a lot of interest within the NHS at local level from Public Health and Clinical Commissioning Groups with a number of invited meetings and presentations. This included a successful invitation to open the Bath and North-East Somerset CCG annual general meeting. The feedback and enthusiasm is universally positive but the financial challenges currently within the NHS have always been apparent. Our impression is that funding directly through the NHS would be a high-risk pathway to pursue and similar services such as cardiac rehab and NHS health checks are currently having budgets reduced. However, as our data evolves we will continue to have these discussions because an ingrained pathway within the NHS would clearly be an exciting option.

Therefore, it seems clear that the best route to long-term success would be partnership with either a commercial partner or national society. Although the nature of our intervention has remained consistent throughout the last 12 months there are multiple avenues for stretch and evolution e.g. secondary prevention and rehab within hospitals, other cardiovascular risk factors, focusing on a certain interactive element of the project such as workshops.

Now that we have established a strong platform and we have some momentum the next step is to sustain the project in its current format. This simply requires the retention of our project manager who can maintain the format in a less than full time capacity over a longer period of time, since this maintenance can be relatively resource and asset light. We recognised early on in our project that the project manager was fundamental to the success of the project and so the financial projections were adjusted early on to give us 'bridging' reserve, once the core digital investment was complete.

We are planning to apply to the Health Foundation again for support via the Spreading Improvement programme. This funding would secure our project manager for the foreseeable future and allow the opportunity to continue to build on the current platform and evolve discussions that are ongoing. We have always been conscious that achieving critical mass in 12 months was ambitious and so with funding that can stretch for a less than full time project manager, this would consolidate the Health Foundation investment and secure the growth of the project.

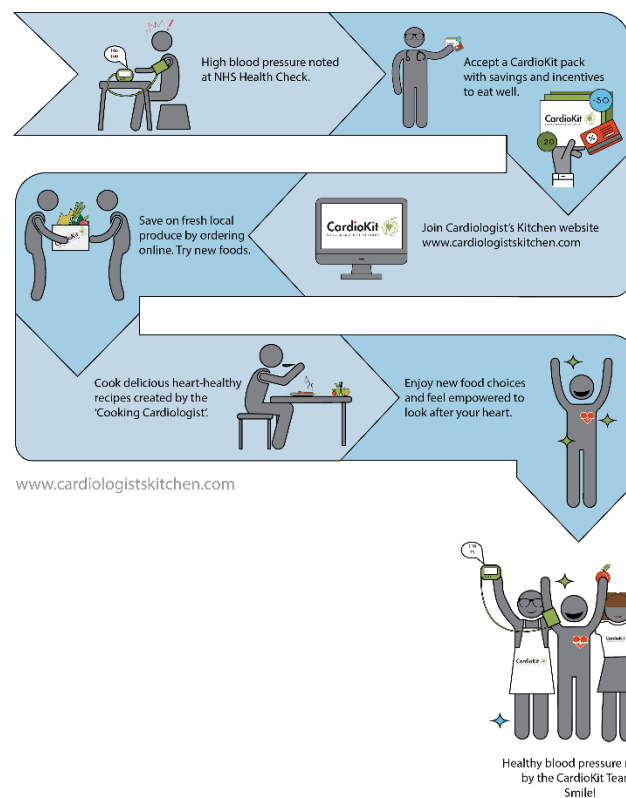
This then puts us in a strong position for an incremental 'organic' growth and spread or, our preferred route, of reaching critical mass and taking a national step via a partner organisation. The discussions with Sainsbury's and the potential with BACPR both look positive and provide two targets. The advantage that we have is that a national iteration of the project is ultimately still relatively resource light with the major investment being in development and refinement of the web platform and a small team that can coordinate the three major arms (digital, communication, healthcare engagement). We can then draw on our national network of lifestyle medics to contribute and disseminate within a wider context to push the agenda around the UK through the CardioKIT platform.

## Appendix 1: Resources and appendices

*A reflection by Mary Anne Fifield, Cardiologist's Kitchen Project Manager.*

The 15-month Cardiologist's Kitchen innovation primarily focussed on hypertension, the major cardiovascular disease risk factor. We initially planned to recruit patients at their NHS Health Checks, record their baseline and tracked data and then perform a universal analysis at the end of the award period.

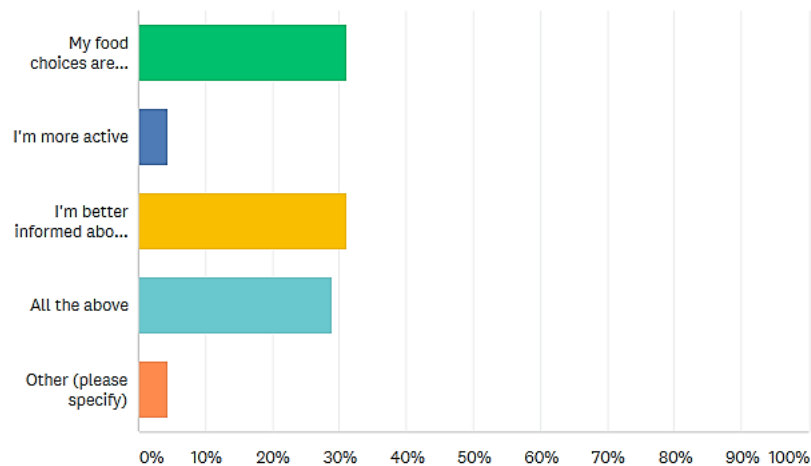
Our infographics illustrate a 'step by step' plan of how the project would work for patients in BANES and Wiltshire and there are currently 20 local GP Practices where patients can be given CardioKit packs and referred to our new website.



To explain, if someone goes for an NHS Health Check and is told that their blood pressure is slightly raised, they may be given a CardioKit pack by their GP or Practice Nurse, and directed to join the Cardiologist's Kitchen website. There they find our evidence-based lifestyle advice, can engage with it and make new dietary and activity choices.

Our website and social media platforms are colourful and vibrant, with health promoting messages and a selection of food science articles which inform and empower our readers. There is a growing collection of delicious recipes, all created with heart-health in mind. Subscribers rate our website 4.5 stars out of 5. Here's the link to see it for yourself: [www.cardiologistskitchen.com](http://www.cardiologistskitchen.com)

Following Dr Ali Khavandi's initial plan, and working with him since late Summer 2016, Cardiologist's Kitchen has fairly closely mirrored what was envisaged and shown in the infographic. Crucially, the all-important endpoints, which rely on patients feeling empowered and reporting lower blood pressure measurements, were achieved. How do I feel? I hate clichés, but I trained as a nurse to 'make a difference'. We asked our subscribers, 'What has changed since joining Cardiologist's Kitchen? Here are the results of our survey;



ANSWER CHOICES	RESPONSES
My food choices are better	31.11%
I'm more active	4.44%
I'm better informed about good heart health	31.11%
All the above	28.89%
Other (please specify)	Responses 4.44%
<b>TOTAL</b>	

The 'Cooking Cardiologist' is inspiring a community to change their health promotion message and how they deliver it, including me. When patient feedback shouts out 'This programme should be nationwide and proclaimed from the roof tops!', I feel proud to be part of it, and making a positive difference to their cardiovascular health.

Until now, my favourite aspects of the Project Manager role were personal career achievements like being interviewed by Radio 4 last year, featured by Humans of the NHS this Summer and invited to facilitate a workshop at the 'Women in Business' conference in 2018. This was until I started collating the patient stories and gained a fuller understanding of the impression we have made, and the benefits patients are reporting back to us.

By posting on social media and updating the website, we are remotely but directly influencing patient behaviour around food choices, with remarkable effects.

As an innovation, we anticipated variations from the original outline and early in the project we revised our plans, due to our own and GPs' time as well as resource constraints. We were advised by our Springfield consultant that it would suffice to collect approximately 35 patient case studies. We are presenting 45 - 50 'stories' patients have shared. Some are long and descriptive, and some are short and 'to the point', but all represent real effort and improvements by patients who follow

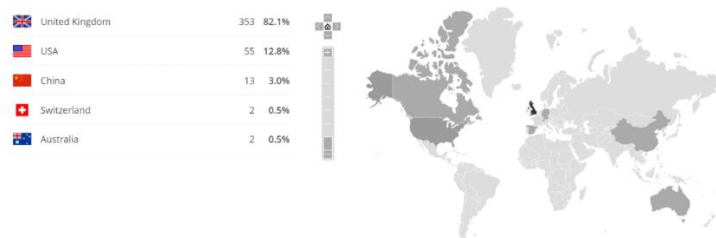
CardioKit advice over many months.

Rather than following the infographic journey, the route people take to Cardiologist's Kitchen is unique to each person, and not as straightforward as a GP referral in every case. When we asked how people found the Cardiologist's Kitchen website, only 31% of our subscribers were referred by a healthcare professional. Here's one response;

'My son ... after my heart attack, he knew I would have to lose weight, but he didn't want me to lose my love of cooking. He found Cardiologist's Kitchen by searching the web'.

Our project's reach is growing, (as this map shows), and the website provides patients with all the advice they need to improve their cardiovascular health if sufficiently motivated to follow it.

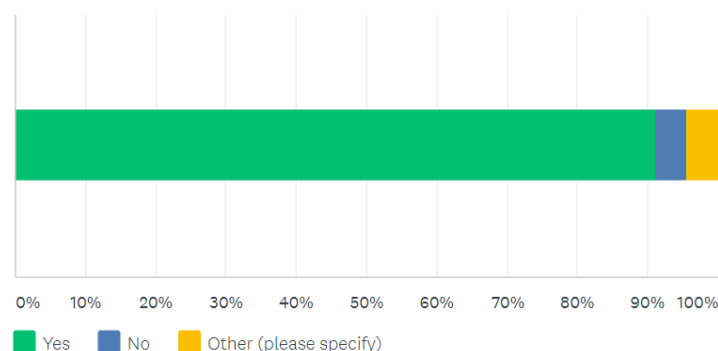
Top locations by opens



Another variation is that inevitably, patients' perception of the impact of their dietary changes, is often not restricted to lowering blood pressure. A diagnosis of hypertension may have been one of the prompts to make their lifestyle improvements, but if they experience significant weight loss, lose many inches from their waistline, feel fitter physically and better emotionally, these are the factors they reference in the stories they submit to us.

There is so much to be positive about. We asked a sample of our followers for their feedback. (The 'other' response commented that they found it 'extremely useful').  
Have you found Cardiologist's Kitchen advice useful?

Answered: 45 Skipped: 0



A 10mmHg reduction of diastolic blood pressure translates to a 50% reduction in stroke risk and 30% reduction in heart attack risk. For the patient who tells us their blood pressure measurement, 'Changing my diet has reduced my blood pressure from 160/80 to 120/60 on regular readings. Thank you', this short sentence represents a significant risk reduction which can additionally motivate more patients to join Cardiologist's Kitchen and change their eating habits.

The stories we heard from patients at our workshops were inspirational, and

feedback from guests highlighted this as motivational for others. To give an opportunity for wider dissemination, we added a new 'STORIES' page to our website - <https://www.cardiologistskitchen.com/stories/> and many of the case studies appear there anonymously (models are used to illustrate them).



What is evident to me, as the Project Manager connecting with patients on a regular basis and reading their experiences, is that their perspective is very different to the health professional's view. Moreover, the patient's perspective is crucial to success.

'Tom has joined the Cardiologist's Kitchen website. He was given a leaflet by a nurse at a Cardiology Outpatient appointment in his local hospital. Tom has found the website more up-to-date and eye-catching than the healthcare information he has seen before, and far less confusing and contradictory than health claims he sees in the media.



Tom hasn't received a CardioKit pack, but he is self-motivated and ready to make changes so rather than reach for the latest celebrity-endorsed cookery book or join a slimming club. He has taken on board the 'Cooking Cardiologist' advice and is buying quinoa which is grown up the road by Emily, (now with new labelling; 'Quinoa: a heart-healthy ingredient recommended by CardioKit'). He purchases rapeseed oil produced by Andy, (who he met at the last CardioKit workshop) and orders a weekly box of fresh local produce from the CardioKit online shop.



He has been cooking Dr Khavandi's recipes, has adapted a few in line with the CardioKit 'rules', (like incorporating 'carb-swaps' and adding 'hidden-veg'), and is even considering submitting a 'CardioKit recipe share' to Mary, the CardioKit PM. Tom feels like he and his wife know Mary quite well by now, as he follows all her CardioKit Facebook posts and his wife sometimes shows him the Cardiologist's Kitchen photos on Instagram. He enjoys reading the newsletters and particularly enjoyed Mary's article about the food she found on her summer holiday -

<https://www.cardiologistskitchen.com/news-and-views/ingredients-for-a-healthy-life-on-ile-de-re/>

Tom has lost a substantial amount of excess weight, despite enjoying good, common-sense food. He no longer enjoys eating processed foodstuffs and feels their tastes are markedly altered now, in a good way.

There is a great recipe for CardioKit's Chilli con Corazón on the website

[\(https://www.cardiologistskitchen.com/recipe/chilli/?sf\\_paged=3\)](https://www.cardiologistskitchen.com/recipe/chilli/?sf_paged=3), a firm favourite which Tom likes to make in bulk and freeze in small portions. What he really likes are Dr Khavandi's articles, which introduce most recipes. This one asks, 'Is red meat really unhealthy?' and it turns out that choosing 'quality over quantity' is the way to go.

Jon feels properly informed about his food choices at last, and has discovered that 'the ingredients to a healthy life' do not include denial and guilt about what we eat.





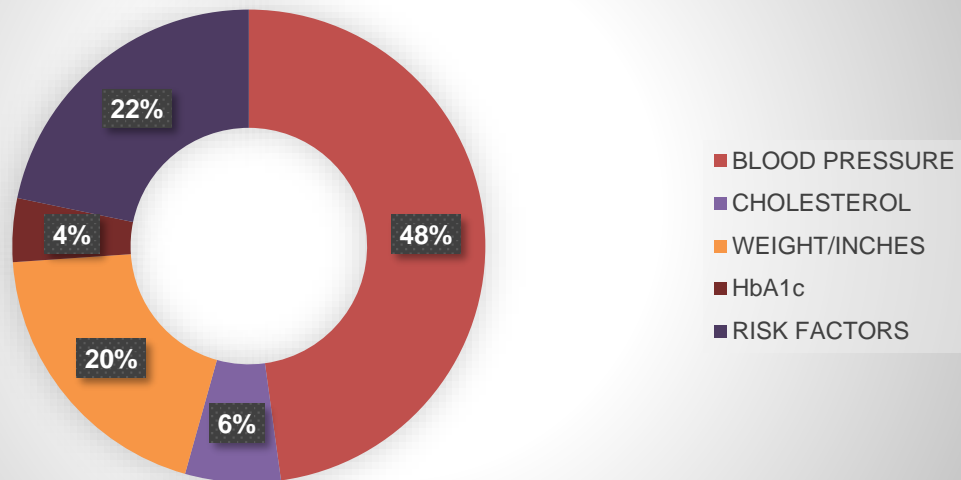
People at work notice the slimmed-down Tom. He sees fellow-passengers on his daily commute giving him a double-take. He can fit back into his wedding suit - handy if they are ever invited to a 70s themed party! Tom feels much fitter and his wife says he has stopped snoring. He certainly feels more refreshed after a night's sleep these days. Blood pressure? No, John can't remember what it measured but the nurse said it was back to normal at his 3-month follow up appointment'.

Patients tell us what is meaningful to them, rather than the measurement of health we are interested in. My impression is that the value they put on this, helps to motivate them. Tom is less focussed on his BP reading but enjoys his food, a good night's sleep, the positive attention he receives from others and being 'the rejuvenated and active Tom'.

We have gathered the patient data under these 5 headings, all those that patients are addressing and mentioned in their feedback to us;

BLOOD PRESSURE	CHOLESTEROL	WEIGHT/INCH LOSS	HbA1c DIABETES	RISK FACTORS

## PATIENT CASE STUDIES



CASE STUDY NO. 01	Both my husband and I have hypertension and are on medication. We would love to cut down on medication required or stop it altogether [with the help of Cardiologist's Kitchen].
CASE STUDY NO. 02	My doctor told me I had slightly high blood pressure and cholesterol, and I was offered statins ... I asked for 6 months to see what I could do. All of this worked; I lost weight, and reduced my cholesterol and blood pressure significantly in that 6 months.
CASE STUDY NO. 03	My blood pressure, from being 170-180/95 mmHg is now 125/75 mmHg and on good days can be 116/65 mmHg. I have followed your principles (and many recipes) for a year now and my weight has gone from 19 1/2 stones to 15st 10 lb and my waist from 44" to 36".
CASE STUDY NO. 04	A year ago, my BP was dangerously high - it is now below 120/80! Also, I have lost 3 stone 7 pounds in 10 months.
CASE STUDY NO. 05	I certainly feel much more informed of the ingredients to a healthy heart ... keep up the good work!
CASE STUDY NO. 06	We have been inspired to look even more carefully at our diet and lifestyle, and we are very grateful for all that the Cardiologist's Kitchen has offered us.
CASE STUDY NO. 07	I have lower blood pressure but most significantly my HbA1c has gone from a concerning 88% to a 58%, moving towards being considered no longer Diabetes Type 2 ... now 46%!

CASE STUDY NO. 08	I thought it best to try and change my lifestyle ... To my amazement it worked, and my blood pressure came down and the Cardiologist has signed me off.
CASE STUDY NO. 09	I am now fitter than I've been for many years and lost 5 stones in the first 5 months with a more gradual 5 lb loss since. My waist went from 48" to 32" and I am now size 'small' in most items. It has cost a fortune in new clothes! ... My cholesterol at my last test 6 months ago was 3.0.
CASE STUDY NO. 10	I've got my life back! (after Takotsubo cardiomyopathy). I also feel that I'm taking control of my own heart health through informed food choices.
CASE STUDY NO. 11	Over the space of 3 months my cholesterol reduced from 5.5 mmol/l to a healthy profile of 3.2 mmol/l. By following Cardiologist's Kitchen advice, I managed to avoid needing to be prescribed statins by my GP.
CASE STUDY NO. 12	Diagnosed with C.V.D (cardiovascular disease) last October, I have since lost 10 kg, reduced my cholesterol from 5.4 to 2.4 in 5 months.
CASE STUDY NO. 13	I had identified cardiovascular risk factors at a routine health check, was hypertensive and had an adverse lipid profile. I was prescribed modifying drugs ... I weigh 80 kg now and I'm on track for my 75kg target by the end of summer. This will let me buy an entire new wardrobe at 32-inch waist (down from 40 inches before we started).
CASE STUDY NO. 14	A change has been made that we will be sticking with ... it has been a worthwhile exercise that will hopefully help to give us improved protection of our cardiovascular systems over the longer term.
CASE STUDY NO. 15	I developed very high blood pressure and remained on blood pressure medication until December 2016 ... I have joined local running club and now run regularly at least 3 times a week. Between January 2017 and March 2017, I dropped 2 stones in weight. I am very proud of what I have achieved and the changes that I made (no more BP meds) to my lifestyle.
CASE STUDY NO. 16	At my NHS Health Check, I was shocked at my blood pressure reading, which measured 143/79 mmHg ... My blood pressure reading is back to boring old 'text book', measuring 120/75 mmHg.
CASE STUDY NO. 17	Having had a heart stent fitted at the age of fifty-four in December 2015, I was trying to look after my health and diet and I was open to receive any helpful information available. I've been using a rebounder (small trampoline) for 10 minutes every day. I also walk across the lovely Mendip hills for between half an hour and two hours most days. It has been very informative to see all the online CardioKit health and diet tips.

CASE STUDY NO. 18	After being prescribed two types of statins which I was intolerant to, with side effects from both medications, I stopped them. I was left with no way to reduce my elevated cholesterol levels. Fabulous news ... my cholesterol went from 7.8 to 3.8 in just six months due to Dr Ali Khavandi's diet and exercise advice. It is life changing and now my husband is following the advice to reduce his 7.1 cholesterol to below 5.
CASE STUDY NO. 19	I have been prescribed blood pressure lowering pills by my GP for a couple of years now and I 'll be honest with you, I thought all this was inevitable and part of growing old. It's good to know I can take control and fix this, so I'm glad I found the CardioKit website – I'd love to lose some tablets!
CASE STUDY NO. 20	Thankfully nothing serious was wrong with my heart, other than some plaque. It came to light I had very high blood pressure, (my cholesterol was within normal limits). When you look at the diet and exercise programme - really, there are simple small changes that need to be made, but it took the wheels completely coming off my bus to realise that ... as for my physical well-being now, there is just no comparison.
CASE STUDY NO. 21	My blood pressure has gone down since following Cardiologist's Kitchen advice. I no longer need to attend cardio outpatients. I have been discharged. Thank you.
CASE STUDY NO. 22	Cardiologist's Kitchen gives great up-to-date information we can rely on. As a result, we have bought a BP monitor and body composition monitor. Despite his exercise regime, [my husband's] body fat and visceral fat composition were quite high. This initiative has finally prompted him to come face to face with the fact that he also needs to make changes to his diet, so he is now generally much fitter and his fat percentage is slowly coming down.
CASE STUDY NO. 23	My blood pressure readings have improved, and my cholesterol levels have dropped, all because of finding and following the Cardiologist's Kitchen.
CASE STUDY NO. 24	Changing my diet has reduced my blood pressure from 160/80 to 120/60 on regular readings. Thank you.
CASE STUDY NO. 25	I lost some weight and that is still ongoing. My husband too, because I do the cooking. We are more controlled in our eating and more thoughtful about what we like to eat and what we need to eat – thanks, to the CardioKit team.
CASE STUDY NO. 26	Yes, Cardiologist's Kitchen has worked for me. My blood pressure is recorded as lower. I'm sticking to the correct fibre inclusive foods and I drink beetroot juice daily.

CASE STUDY NO. 27	My BP remains roughly the same but does fluctuate - weight is slowly decreasing though.	
CASE STUDY NO. 28	I am doing as you recommend but I'm trying to prevent rather than cure ... so I'm making changes now, so that I am healthier.	
CASE STUDY NO. 29	I am on two separate pills for high B.P. and get very swollen ankles. I need Cardiologist's Kitchen.	
CASE STUDY NO. 30	Thank you to the CardioKit project - my blood pressure is lower. Now I need to keep working to reduce my weight.	
CASE STUDY NO. 31	Blood pressure is under control and stable. Changes in lifestyle are giving ongoing weight loss which has many benefits. Last check, about 20Kg down from my maximum weight.	
CASE STUDY NO. 32	Cardiologist's Kitchen to me means weight reduced and blood pressure stable.	
CASE STUDY NO. 33	I've changed to smaller portions, being more aware of what I'm eating, less fats and sugars, more variety of vegetables and brisk exercise for 20 mins a day. It's doing me lots of good.	
CASE STUDY NO. 34	I think I need to follow the Cardiologist's Kitchen dietary advice for a bit longer to see big improvements, I feel better already though.	
CASE STUDY NO. 35	I was focusing on dieting, low fat products and services such as Weight Watchers and Slimming World without effect. I now eat well, enjoy food and continue to lose weight. As a result, my blood pressure and cholesterol have both come down and I have reduced some of my medications.	
CASE STUDY NO. 36	Overall fitness has improved, and weight loss has been sustained. Food choices and information have led me towards a far healthier diet. This programme should be nationwide and proclaimed from the roof tops!	
CASE STUDY NO. 37	My blood pressure readings are good, and I am hoping by following suggestions for heart health I can keep them that way.	
CASE STUDY NO. 38	I have become much more informed about my diet. I have lost over a stone in weight, my activity and fitness levels have greatly increased. The recipes have helped motivate me and I recognise that I can still eat good food.	
CASE STUDY NO. 39	I use the CardioKit recipes. I am a vegetarian who had an unhealthy diet. I eat better now and it's good to know the science behind the foods we eat.	



CASE STUDY NO. 40	My BP was 190 over 120 when I had the heart attack - now 120 over 80. Cholesterol level dropped from almost 5 to 2.3. My resting BPM is 48. I achieved this by following a Cardiologist's Kitchen diet, cutting alcohol, cutting sugar and excess fats, combined with Phase III and then Phase IV Active Health gym programme.
CASE STUDY NO. 41	Basically, by eating Mediterranean style diet advised by Cardiologist's Kitchen I have improved some of my risk factors. Still don't have the energy because of shortness of breath to walk far, which I find frustrating. Unfortunately, my Cardiologist has signed me off as he says I have improved as much as I ever will. I have got my diabetes reading down to normal. BP on average stays on normal readings. Cholesterol normal. Still suffer with water retention.
CASE STUDY NO. 42	My weight has dropped, and my sleep has improved since subscribing to the Cardiologist's Kitchen website.
CASE STUDY NO. 43	Following a better diet (the CardioKit one) and going to the gym are helping me to prevent problems in future.
CASE STUDY NO. 44	I have been diagnosed with high blood pressure. My GP has prescribed 2 different tablets a day just for this condition. I heard about the Cardiologist's Kitchen from the pre-diabetic nurse at my local surgery. I'm was very interested in following this and starting a new healthy style of eating, in the hope that I could possibly get my blood pressure down. I picked up the CardioKit pack on a Saturday morning, then I also bought a blood pressure monitor on Sunday. I have now been sorting out my shopping to incorporate my new, healthy heart regime. I have been looking through the Cardiologist's Kitchen website with added interest ... to help me change and improve my blood pressure, before it's too late.
CASE STUDY NO. 45	<p>Firstly, my blood pressure readings have been high, probably partly due to stress because I am facing an operation. I am a vegetarian who speed walks everywhere so am surprised by my blood pressure readings. I really don't want to take medication, so was really interested in the preventative work Cardiologist's Kitchen are doing. I need to re-visit my GP again once I have done a week of readings, if it is still high.</p> <p>I am so inspired by your approach and interested to hear about the project that you are working on ... as a food lover who is keen to improve my health.</p>
CASE STUDY NO. 46	I saw your video-clip on BBC Points West. I have struggled with my weight all my life and I now have high blood pressure which I am trying to get under control. I am 42 years old and a mum to a four-

	<p>year old daughter and I want to be around for my daughter for as long as possible. I have found Cardiologist Kitchen very helpful with their simple, yet very effective dietary advice. The website with its content, articles and stories are a source of motivation and the recipes are all simple and delicious. I especially find the stories motivating. I really hope that this project can carry on.</p>
<p>CASE STUDY NO 47</p>	<p>I have a heart condition, am also hypothyroid, had (treated) raised blood pressure and glaucoma. Then to cap it all, last year I was told I was prediabetic! This was a huge shock to me, as I have a BMI of less than 19, and am very active.</p> <p>Thank you so much the CardioKit pack, much appreciated. I think the whole idea of what you are doing is brilliant, so much more positive to address health issues through lifestyle changes and information rather than through medication. I have brought my levels back into the normal range so thank you once again.</p>
<p>CASE STUDY NO 48</p>	<p>I'd like to thank all the Cardiologist's Kitchen team for their help and support. I have started making little tweaks to our family food choices such as carb swaps, and looking for nitrate-rich vegetables. I have also started making more of an effort to do some activities that make my heart work harder and leave me slightly breathless – for example, I went swimming for the first time in years on Friday!</p>

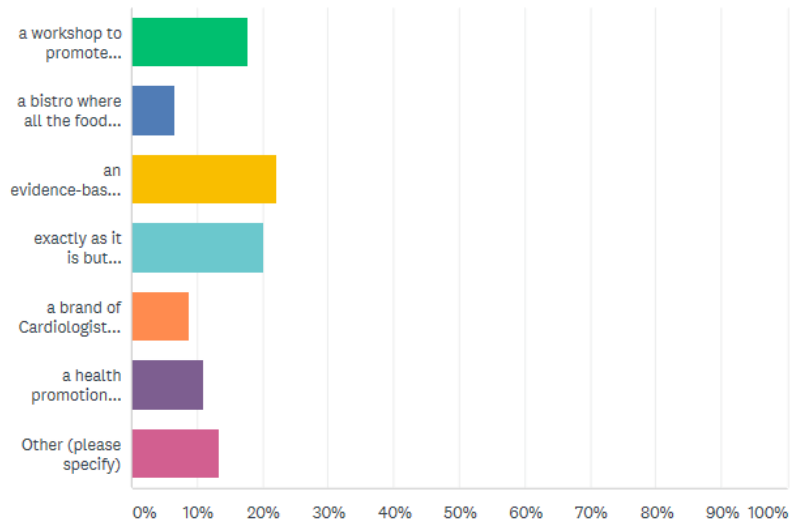
*Full stories are available – please request them from [mary@cardiologistskitchen.com](mailto:mary@cardiologistskitchen.com)*

The lifestyle changes have potential to positively change measurements of health, with a domino effect so that multiple systems see benefit, and we anticipate that research into the Cardiologist's Kitchen approach will be one of the next steps. We asked some followers to explore our potential next steps, keeping in mind that even the most 'outside the box' thinking is achievable. We have already mentioned that one 'Cardiologist-endorsed food option' is already available. Most of these respondents would like to see the current project spread nationally and be combined with an exercise programme.



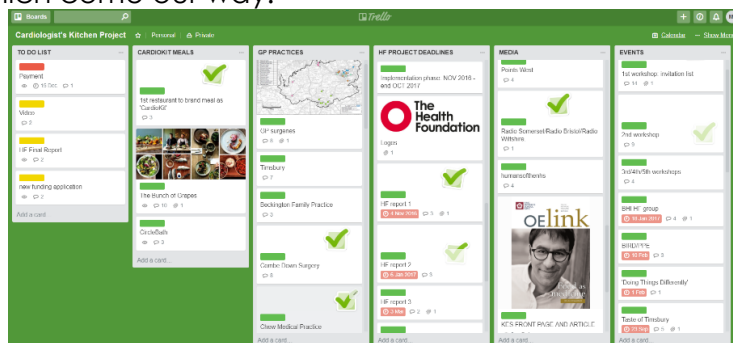
## If you could choose and we asked you to brainstorm ideas, what would Cardiologist's Kitchen be?

Answered: 45 Skipped: 0



ANSWER CHOICES	RESPONSES
▼ a workshop to promote heart-healthy cooking to patients	17.78% 8
▼ a bistro where all the food and drink choices were delicious and heart-healthy	6.67% 3
▼ an evidence-based diet and exercise programme combination	22.22% 10
▼ exactly as it is but nationwide	20.00% 9
▼ a brand of Cardiologist-endorsed food options	8.89% 4
▼ a health promotion programme available on prescription	11.11% 5
▼ Other (please specify)	Responses 13.33% 6
<b>TOTAL</b>	<b>45</b>

GP Practices continue to restock on CardioKit packs and Cardiologist's Kitchen continues to escalate its spread and to take advantage of the many networking opportunities which come our way.



There is potential to build on our progress over the last year or so and personally, for the benefit of all those patients who love what we do, I really hope Cardiologist's Kitchen remains open and functioning.

