



Patient feedback on the benefits of artificial intelligence guided clinical coaching



Yorkshire
& Humber
AHSN



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1. Executive summary

The NHS is currently under considerable pressure to sustain services and indeed is falling further and further behind with the delivery of elective care. The identification and subsequent support for patients who are the most frequent and likely users of acute hospital services is an opportunity to consider more effective ways to enable patients to do more to improve their health and wellbeing reducing their likelihood of needing urgent hospital attendance and a stay in hospital.

This study was conducted by Graham Prestwich, Public and Patient Engagement Lead at Yorkshire & Humber Academic Health Science Network (AHSN). His report investigates patients and public perception of novel, predictive and preventive care model -AI-Guided Clinical Coaching-that uses data and algorithm (AI/Machine Learning techniques) identification of patient at highest risk of unplanned care (often referred to as High Intensity Users, HIUs). Identified patients are invited to a nurse-led, supported self-care intervention. The paradigm shift is that the health and care system through a data driven approach gets ahead of the patient and proactively approaches them with a secondary and tertiary preventive offer. This model expands on the principles of population-based health & disease screening and takes it into patient groups with poor disease control and rising risks of unplanned care.

Developing a better understanding and insight of the patient's view of this novel service and its added benefits is vital to continually improve service provision. Thirty people were invited to participate in an interview to learn about their views and experiences of managing their long-term conditions. There were three groups, those who participated in the service, those who declined to participate and a group who had not been involved at all. Twenty-five people actually took part.

The results show a strong support for the approach across all three groups of patients. Those who participated in the service were particularly positive about the way clinical coaches had approached them to understand their health and wellbeing needs, both physical and mental health needs. The results showed that the clinical coaches helped the enrolled patients overcome many barriers including knowledge, confidence, motivation and building a positive attitude.



There were few comments and issues raised about the automated screening of records, with considerable support for this approach being carried out in a transparent and properly managed way. Negative comments were limited to a few points which are relatively simple to rectify.

A series of twelve recommendations have been made for further ongoing development of the approach and ways to refine and enhance patient recruitment and experience.

"You don't recognise your own ability until someone works it through with you."

2. Background

Twenty years ago, real world trials, such as [K. R. Lorig et al 2001](#)¹, showed that chronic disease self-management programmes were effective in improving healthy behaviours, self-efficacy, and health status resulting in fewer visits to the emergency department.

Almost a decade later HN was founded in 2010 by clinicians and researchers from the Karolinska Institute in Sweden, who were keen to pursue this patient centred approach.

HN specialises in the practical application of population health management, by using AI/machine learning techniques to identify high-cost, high-need patients, and supporting them to improve their outcomes and reduce their care consumption. The journey in the UK began in 2015 with a large HRA approved and randomised clinical trial with the Nuffield Trust. The trial that recruited 1800 participants across seven NHS Acute Hospital trusts demonstrated that the use of advanced data science and AI for screening high-need, high-cost patients, combined with digitally enabled patient centred programmes, significantly increased system efficiency, patient experiences and clinical outcomes.

From March 2020, HN has been supported by the NHS Innovation Accelerator to scale the work nationally. The service is currently being deployed in the Vale of York and several other ICS footprints. It is primarily the York population that has been focus for this report. All

¹ <https://europepmc.org/article/med/11769298>



patients recruited by HN have completed the validated patient surveys PAM 13 and SF 12.

A report on the HN's service "AI-guided clinical coaching" (formerly Proactive Health Coaching), that is already evaluated through a national RCT (yet to be published), has produced several University College London (UCL) Master's theses, posters, and case studies.

The first step in the implementation process is the automated identification and prioritisation of those people who are most likely to achieve the greatest benefit from clinical coaching. Routinely collected, patient record data enables predictive modelling to be used to prioritise those people most likely to have an unplanned care need that could be significantly attenuated by the clinical coaching service.

The clinical coaching service involves a process that helps patients achieve the greatest benefit from the right treatments whilst supporting and encouraging them to work towards an improvement in the quality of their lifestyle. Importantly the service also helps patients build their own confidence and recognition for what has been achieved and improved, a critically important elements of the value coaching bring to improving mental as well as physical health and wellbeing.

The Clinical Coach is a specially trained nurse or other healthcare professional. They work with patients on a one-to-one basis, looking at the circumstances, behaviours and events that are proven to be most effective in reducing clinical complications and the need or necessity for an unplanned emergency hospital attendance or admission.

Working with their clients, Clinical Coaches will help and support them to develop their personalised coaching plan that will:

- Help people understand and manage their illness, medicines, and other treatments.
- Identify and help to access the NHS services that best support specific health needs.
- Coordinate and communicate with other health and care services where appropriate.
- Address specific triggers that cause potentially avoidable ill health events.
- Grow the patient's mental and physical wellbeing, knowledge, skills, and confidence.
- Help prepare for a planned hospital appointment, to maximise the benefit of the visit.



After an initial meeting with the Clinical Coach, (may be in person or a phone call) the coaching sessions take place by telephone at a mutually convenient time. The coaching and support usually provided for three to six months, depending on specific and individual needs. If the patient changes their mind and no longer wishes to participate, they are free to stop the coaching support service at any time.

Yorkshire & Humber Academic Health Science Network, (Yorkshire & Humber AHSN) in collaboration with HN designed and implemented a qualitative study of patient and public views and experiences of being invited and involved in the programme.

The aim of the work was to (a) identify the elements of the approach and the intervention that have the greatest positive impact and acceptance from a user or potential user of the service perspective and (b) encourage the sharing of insights and experiences that will enhance and strengthen the service and its delivery to maximise positive impact and encourage patients who are most likely to benefit to be recruited into the programme.

The work documents and compares the views, experiences, and expectations of three different groups of people:

- 1) Those patients currently using or have been supported by the service.
- 2) Patients who have been approached to participate and then decided not to enrol.
- 3) A similar matched group of people who are not eligible to be considered as they live outside the area of the pilot sites.

The people recruited to group three bring the experience and insight from a similar age group and a similar clinical experience perspective of living with a variety of long-term health conditions.

The outcome will also guide and inform future funding applications such that a truly and authentically refined intervention is proposed centred on a good understanding of the needs and preferences of people who are most likely to benefit from this service.



3. Requirement

The requirement is an independent report of patient and public feedback and insight, conducted by Yorkshire & Humber AHSN on behalf of HN. Graham Prestwich who is the Public and Patient Engagement Lead at Yorkshire & Humber AHSN designed the study, conducted the interview, and drafted the report. The work was conducted in the time period April 2021 to June 2021. Further details in Appendix 1.

4. Method

To meet the requirement, it was considered important to enable people to provide their authentic feedback on each of the different components that go to making the complete Clinical Coaching Service and to encourage and support new and novel insights to be shared and discussed.

This also provided an opportunity to ask people if they would be interested and willing to consider further participation in the service development and delivery to strengthen a genuine patient centred approach. Patient stories are a powerful tool in the work of patient and public involvement. Stories enable and encourage a very individual experience and insight to be brought to the attention of the reader or audience. Often these stories are viewed or heard as a stand-alone item, separated somewhat from the core business of a meeting or organisation and whilst they help to shape conversations their full potential as a driver for continual service improvement is often not achieved.

This work aims to bring those stories together to create a compelling and impactful narrative such that important service design and delivery decisions can be more confidently informed and guided by patient insights and experiences.

The outputs will inform what aspects of the service need to continue, what needs to change, and what could be done more effectively. Through more informal 1:1 conversations there is the opportunity to gain insight more authentically into the variety and breadth of views as well as hearing in more detail why people hold those views. By gaining a better understanding of why, generates the knowledge necessary to be specific about what can be changed to improve the outcomes for patients. It also supports and encourages greater equity of contribution to the outcome.



This approach also supports people to bring a wide and diverse perspective to the findings by minimising barriers to participation and in that way contributes insights that can potentially reduce variation and inequalities. The only requirement is the ability to have a telephone conversation in English from home. It is generally accepted that more people from different backgrounds can speak and understand English for example than are able to read English.

The aim of the analysis is to identify similar and recurring themes and at the same time capture as much as possible the breadth of the feedback. To help achieve the analysis objectives a semi structured approach to the conversations was agreed so that as much as reasonably possible similar topics were considered throughout all the 1:1 conversations.

There are seven separate elements to delivery of the Artificial Intelligence guided Clinical Coaching (AICC) service and these steps were used as the basis for the structure of the conversation. The process flow that describes the complete clinical coaching service is provided in Appendix 2. This approach enabled the interview conversation to have a structure and flow that took a logical sequence and a natural progression through the patient journey of experiences.

The conversation also includes an introduction and comments on the concept of clinical coaching and feedback on these two topics was also collected so the results looked at nine domains in all.

Stage	Insights
(1) Automated screening	Views on the AI approach to the process
(2) Manual selection	Final selection - feedback or comments
(3) Invitation	Comments and feedback on the methods
(4) Onboarding	The opening patient/coach meeting
(5) Intervention	Views on what and how
(6) Discharge	Views and experiences of how this feels
(7) Evaluation	Discussion on what to measure and how

4.1 Invitation to participate

HN, the provider of the end-to-end AICC solution, were responsible for identifying and contacting people who had been or were currently in



receipt of the service and the group of people who had declined the service for whatever reason. This included gaining from everyone their agreement to participate and agreement to share their name and telephone number with the interviewer from Yorkshire & Humber AHSN. HN were also responsible for booking an agreed time for the discussion to take place. The only information shared with Yorkshire & Humber AHSN was the agreed time for the discussion, the individuals name and telephone number.

Group A Receiving the service
Group B Declined the service
Group C Service Naive Patients

For the third group, people who had no experience or prior knowledge of the service, the Yorkshire & Humber AHSN were responsible for identifying a group of people of a similar age who had long terms conditions and are regular users of NHS services.

All participants were offered a small recognition of their time taken to participate in this feedback conversation. The conversations took place between April 12, 2021, and May 28, 2021.

4.2 Recording

All participants were asked if they agreed to recording the discission for the purposes of transcriptions which were used for the analysis. All these records will be permanently deleted once this report has been published.

4.3 Analysis

A set of codes was developed based on experience of likely topics and responses under each of the seven subject headings. These coded responses were further organised as positive, neutral, or negative comments and feedback. This enabled the initial analysis of the findings and to compare results across the three groups.

To enable additional unexpected insights to be collected the initial set of codes was supplemented by adding new codes to accommodate novel comments and feedback so that as much as possible all the feedback had



been captured in a coded format. A total of 241 codes were produced and used in the analysis.

5. Results

Feedback was collected from 25 people who provided a total of 405 items of views and insights on the service. The average was 16.2 items of feedback per person taking part. This demonstrates the high value of this approach being used to collect authentic patient experience and insights and enables comparison of response rates with the feedback received across the three groups. All 405 items were coded to enable comparisons to be made and common themes and similar feedback to be collated.

The five people who did not contribute declined for a variety of reasons including changed their mind, not feeling well enough, and not able to find a convenient time. Two were from group A and three from Group B, none from Group C.

The conversations with those in the service and those people invited by the interviewer were the easiest and generally free flowing discussions. Those conversations with the people who had declined the service were slightly more difficult to elicit lots of comments and feedback. All participants agreed to recording the interviews for transcription purposes and they were all offered a modest recognition fee for their time in doing this work.

The average age of the participants in each group is presented in Table 1. The three groups were well matched for age.

Table 1

Group A Receiving the service (8 people)	68 Years
Group B Declined the service (7 people)	65 Years
Group C Service Naive Patients (10 people)	68 years

Participants were asked about their online access to NHS services such as booking appointments and the results, Table 2, showed some variance across the groups. There is a suggestion that those people who are less familiar and regularly use digital service access gained from having a



conventional telephone-based approach to improved and regular communication.

This may help to reduce inequalities in access to care for some groups of people.

Table 2

Group	Wi-Fi at Home	Use online NHS Access
Group A Receiving the service	8 out of 8	5 out of 8
Group B Declined the service	7 out of 7	5 out of 7
Group C Service Naive Patients	10 out of 10	9 out of 10

The number of responses from each member of the three groups are presented in Table 3.

Table 3

Group	Number of people	Feedback items	Average per person
Group A Receiving the service	8	125	15.6
Group B Declined the service	7	87	12.4
Group C Service Naive Patients	10	193	19.3

Those people who were new to the service and had not been previously involved in any way in this service shared the most feedback and comments, with an average of 19.3 items per person. Those who had declined the service shared least at 12.4 items of feedback per person.

The higher level of engagement in the conversations may have been affected by several factors including (a), previous experience of being involved in patient and public involvement work and (b) known to the interviewer in the case of Group C. Both these factors would contribute to more feedback in greater depth.

Members of Groups A and B were speaking to a stranger on a phone call for the first time and the results show how, by adopting this approach, a substantial amount of insight and feedback can be collected. The results also suggest that for people who are positive about a service they receive



may have a little more to say than those with some concerns. The difference is 20% fewer comments to share.

However, for those who had declined the service, providing 12 items of feedback per person shows that this approach was also an effective way of hearing views from people who potentially had the least vested interest in the outcome of the feedback.

Each item of feedback was coded and that included recording whether the item was positive towards clinical coaching, neutral or negative. The responses in total and for each group are presented in Table 4.

Table 4

	All responses	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	69%	85%	40%	72%
Neutral	19%	10%	38%	17%
Negative	11%	5%	22%	11%

Almost 70% of all the feedback received was positive towards the service covering nine separate domains. Of all the feedback 19% highlighted neutral comments and views and 11% was negative feedback. In terms of ongoing service development, the positive is important to be aware of and to continue to be supported, the negative needs full attention and the neutral feedback helps identify areas where improvements need to be made. The positive responses from Group A and Group C provide material to describe what is good about the service and the neutral and negative responses from Group B are likely to be the most valuable source of learning for service improvement.

Table 5 shows the number of responses by the stage of the service delivery process. The most feedback was received about the intervention, then the concept, followed by the invitation and then the automated screening.





Table 5

	Introduction	Concept	1 Automated screening	2 Manual Selection	3 Invite	4 Onboarding	5 Intervention	6 Discharge	7 Evaluation
Positive responses									
Group A intervention	13	14	14	4	2	11	32	11	5
Group B declined	2	13	4	2	1	3	8	0	2
Group C new subjects	7	17	11	1	22	18	35	16	13
Neutral responses									
Group A intervention	1	2	2	0	2	3	1	1	0
Group B declined	5	14	1	0	9	0	4	0	0
Group C new subjects	2	5	8	10	3	3	1	0	1
Negative responses									
Group A intervention	0	2	0	1	1	2	1	0	0
Group B declined	1	1	5	1	7	2	2	0	0
Group C new subjects	0	1	3	12	2	1	1	0	0
Total for each stage	31	69	48	31	49	43	85	28	21



Considering each stage of the process in more detail and the most common themes revealed by the 25 people participating is summarised below.

5.1 Introduction

Table 6 shows the most common responses across the three groups. All three groups were positive about the approach. Those who had been involved were clear about the benefits and advantages they had experienced by being involved. People who declined did reveal that they did not see this as particularly special and extra over and above their personal experiences.

Table 6

Introduction	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Understanding and empathy Someone to talk to Feeling empowered	Other similar programme already available	This is a good way to go
Indifferent	Followed consultant advice to go to A and E	Not necessary, already provided for	Concerns about scam phone calls
Negative	Nothing mentioned	Partner experience of the same was poor	Nothing mentioned

5.2 Concept

Table 7 again demonstrates how positive each group were about the idea and some specific issues and concerns were highlighted across the three groups. They provide suggestions on how to better present the service to patients so that they understand more clearly from the start what value and benefit it provides. Group C, those who are service naïve, raised important questions about equity and cultural barriers needing to be properly considered. For those who declined the service, the approach is still viewed as positive. This suggests that in the initial presentation and approach it is very important to communicate effectively the benefits, advantages and what is unique and special about this intervention.



Table7

Concept	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Generally, a good idea Understanding needs Steer through my options	Generally, a good idea Build local friendships Steer through options	Generally, a good idea Some good NHS Examples Steer through options
Indifferent	NHS asks the same questions repeatedly	Don't see the need Already Supported Already know it all	Concerns about equity and equality My GP is very good
Negative	Doctors' decision Privatisation concerns	Some treatments over the phone a disaster e.g., physio	Cultural barriers

The concept, a total of 69 responses

Common themes across all three groups were: (with frequency)

- Generally, a good idea and a supporter (19)
- What is available and how to access it, steer through the options (5)
- More effort to identify people early – particularly loneliness (4)
- All the rest a frequency of 2 or less

The concept also received the most neutral comments, 14 in total

Common themes across all three groups were: (with frequencies)

- Already a lot of support (3)
- Concerns about equity and equality (3)
- Does not really apply to me (3)
- I have a very good GP so less need for this (3)
- All the rest a frequency of 2 or less

"You don't recognise your own ability until someone works it through with you."



5.3 Automated Screening

The feedback on screening is presented in Table 8 which shows that there is generally a positive view on the sharing of data to run the automated screening. Those that declined revealed some concerns from some of the group members who felt there was a lack of transparency on this element of the process to the point of suspicion and concerns. This concern should be explored in more detail to help understand and overcome the issues raised. Those who were not involved raised a number of questions about compliance rules and personal data accuracy and the potential to miss important features that are relevant to recovery, mental health and wellbeing in particular.

Table 8

Automated Screening	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Happy to share Good approach no problem Don't see anything wrong with this approach	Happy to share Good approach not a problem Need to find people with unmet needs	Happy to share records Good approach Needs strict rules and compliance
Indifferent	How is this done? Records are not complete with relevant information	nothing	Concerns over suitability of patient records Question reliability of patient data What about errors?
Negative	Nothing	Unhappy about this Lacks transparency Suspicious and concerned	May miss mental health needs Consent issue?

The automated screening, a total of 48 responses

Common themes across all three groups were: (with frequency)

- Think it is a good approach – no problem with this (9)
- Happy to share (8)
- Do not see anything wrong in doing this, it is great (5)
- Just as long as strict rules are adhered to (3)
- All the rest a frequency of 2 or less

"Concerned about the quality and accuracy of medical records."



5.4 Manual Selection

There was not a lot of feedback spontaneously provided on this stage as shown in Table 9. This was a surprising result, and it is the area where more comments and feedback were anticipated. The involvement of an unknown individual reading patient notes and adding a personal perspective on selection remains an area where more patient feedback is required. This is potentially a silent area of concern and needs to be more thoroughly explored.

The more negative views show some concerns about the details, and it would be a topic to explore in greater depth in future patient feedback work to uncover more patient views about this aspect of the programme. It does, of course, also raise the challenge about how the patient may be included in a selection conversation.

Table 9

Manual Selection	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	No issues	No issues	No issues
Indifferent	Nothing	nothing	Some concerns, best involve the patient in this needs cultural sensitivity and other factors to consider
Negative	Concerns about picking easy to manage patients	Lacks transparency	They don't know me Concerns about missing those with the greatest needs Missing key information

The Manual Selection received the most negative comments, 14 in total

Common themes across all three groups were: (with frequencies)

- Missing key information about me and my home (5)
- Concerned about missing those with the greatest need e.g., Mental Health issues (3)
- All the rest a frequency of 2 or less



5.6 Invitation

Table 10 reveals the importance and value attached to written communications from the NHS in the form of GP or hospital letters. The rapidly changing environment of mistrust on electronic and telephone contacts has, it would appear, contributed to heightening the importance of written communication and the value of a recognised and verifiable NHS source. There was positive feedback from the service naive group about the source and content of letters of introduction. The results from the group who declined the service show that the initial communications did not necessarily provide the type of information and the clarity that they required to make a fully informed decision about the service, comments such as timing, unsure, various concerns, confused, and negative response all suggest that the missed opportunities could be overcome by involving users in the design and content of patient communications from the start.

Table 10

Invitation	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Prefer a letter Timing is important	Timing is important	Prefer letters from GP Prefer letters from hospital Personal letter with sufficient information to decide
Indifferent	Not bothered Relaxed about it	Not sure who the letter was from Various concerns	Authentication of the message is important
Negative	Most likely to throw a company letter in the bin	Confused Did not commit to this Quite negative	Must involve the family Checking the authenticity of the invite

The invitation, a total of 49 responses

Common themes across all three groups were: (with frequency)

- Prefer a letter (7)
- Prefer it to be from my GP (6)
- Prefer it to be from the hospital (4)
- Needs a personal letter with enough information to make an informed decision (4)
- All the rest a frequency of 2 or less



5.7 Onboarding

This is a critically important stage in the process, setting out the future direction at the time when the clinical coach and the patient get to know each other and build the rapport that is so important in a successful coaching model of delivery as shown in Table 11.

The feedback across all three groups shows a very positive view about building an effective partnership and whilst there is a lot of interest in face-to-face meetings, it is apparent that the phone works very well for most people too.

It may be necessary to include more information about the telephone approach used in this work to help people feel that it has many advantages too. Comments on the ease with which conversations can be conducted and the volume of information that people can handle effectively in a single call should be considered in the approach taken.

Table 11

Onboarding	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Important to get to know each other Matching coaches with patients Happy with phone or F to F	Happy with phone or F to F It's a good idea Know the person not the condition	Prefer F to F Important to get to know each other Get to know each other
Indifferent	Not bothered either way Tread carefully to start with Important questions can be quite tricky	Nothing reported	There are other examples of this approach Important questions can be tricky
Negative	Too much information at first Did not understand what was going on	Concerns over being critical so tend to be quite defensive Too much information to start with	Concerns over being critical leads to a defensive response.



The onboarding, a total of 43 responses.

Common themes across all three groups were: (with frequency)

- Important to get to know each other and share ideas, more of a chat (6)
- Would prefer face to face discussion (5)
- Get to know the person not the condition (5)
- Happy either way, phone, or face to face (4)
- All the rest frequency of 3 or less

“Maria, we [my wife and I] are really grateful and appreciate all that you have done for us.”

5.8 Intervention

The feedback in this section revealed many features that underpin the health behaviours and show up the foundations of good clinical coaching success. Lots of very positive words, Table 12, including confidence, independence, motivation, holistic, connections, relationships and the right language. Despite all the positives it is also apparent in the declined group that there is insufficient understanding of the true value of the clinical coaching approach, not needed, already being provided, linking it to social prescribing. It is apparent from this feedback that being able to put into appropriate language the full extent of the added value of the service still has some way to go to reach more people with the appropriate messages so that they see they have needs which can be met and fulfilled.



Table 12

Intervention	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Changed mu ways, now I feel more confident Supporting confident independence and positive motivation Improved my mental Health Wellbeing	Equal partnership with clinicians Supporting confidence and motivation Able to review progress together	Making connections is important Taking an holistic approach to Health and Wellbeing Building relationships
Indifferent	Good family close by helps	Social benefit of a chat Using the right language is important Make it more social e.g. cooking together	The right language is important
Negative	Confused and did not know what it was all about	Not needed Focussing on issues with NHS Care	NHS is already doing this through social prescribing

The intervention, a total of 85 responses.

Common themes across all three groups were: (with frequency)

- Supporting confident independence and positive motivation (9)
- Able to review together effectiveness of actions taken (6)
- Build a strong relationship - trusted coach (5)
- Changed my ways and I now feel more confident (5)
- Gives me all the time I need and very individual (5)
- Helps to make other NHS services more effective (5)
- Making connections with local services and groups (5)
- Mental wellbeing is grossly underserved by the NHS (4)
- Should be a more holistic approach to good health and wellbeing (4)
- All the rest were 3 or less.

**"I don't want to know what I cannot do.
I want to know what I can do."**

5.9 Discharge

By the time we reached this stage of the interviews people had rather less to say about the topic. Those that had declined understandably did not add much at all as shown in Table 13.



Those who had taken part were keen to highlight the value and benefit of not cutting ties completely with the clinical coaches. Also, the good appreciation that this was a time limited service which had a huge element of helping people acquire new skills and capabilities beyond their expectation. It also reflects how patients see their needs changing and evolving and potentially teaching them how to be more confidently independent and that this can be sustained.

Table 13

Discharge	Group A Receiving the service	Group B Declined the service	Group C Service Naive Patients
Positive	Knowing contact can be made if required- safety net Fully understand it is limited Mutually agreed	No comments	Should involve shared decision making Usually agreed and is based on being able to manage independently Make sure new connections are made
Indifferent	No comments	No comments	No comments
Negative	No comments	No comments	No comments

"What else can we solve because now I am a trusted partner in this set up."

5.8 Evaluation

At this stage participants were running out of ideas and consequently suggest more work is done in future programmes to explore this topic in greater detail. However, there are some very important themes in the feedback about having patient centred outcome measures that patients emphasise as important and relevant to them as shown in Table 14. Such attributes are not always easy or straightforward to measure, but none the less will yield insights that will be very valuable when it comes to designing recruitment and onboarding materials and processes.



Interestingly the comment about the appropriateness of the initial referral also loops back to why some people did not want to join the programme, they felt that it was not appropriate for their needs, and this would potentially help in the refinement of the automated manual selection stage. The service naïve patients have made several recommendations which help to reveal the sort of information that is more likely to appeal to people who are new to the service during the initial approach. These ideas could be developed as is suggested in patient stories to capture key attributes of the service offer.

Table 14

Evaluation	Group A Receiving the service	Group B Declined the service	Group C Service Naïve Patients
Positive	Feeling better in myself Individual progress and confidence Feeling of energy	How much more confident someone feels Measure quality of life	Feeling of confidence At 6 and 12 months What is the person now doing differently? Collect patient stories
Indifferent	No comments	No comments	Appropriateness of the initial referral
Negative	No comments	No comments	

“How is the carer contribution assessed throughout?”

5.9 Other results

Several people identified what they considered to be similar service offerings and based on what is known of these services, it is interesting to see how more detailed explanation is required to bring out the true value of clinical coaching. This service could help people to achieve far more than they ever imagined they could, even with additional resources being made available to them.



This is valuable insight for service development and positioning.

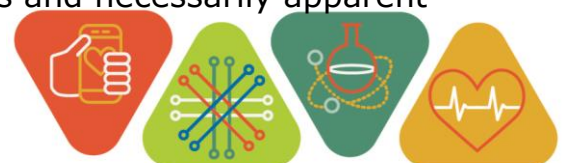
- Nuffield Health
- Community Nursing role
- Social Prescribing
- Feel Good Factor

Interestingly all these require the service user to be more proactive and take on greater responsibility for organising themselves and attending. Some of these are examples of resources that Clinical Coaching may help someone access and then follow up on the experience and perceived benefit. These other services do not appear to help someone prioritise what is most important and what they are most likely to change and be willing to change in the short term.

One patient in the declined group decided not to continue with the interview.

6. Discussion

- 1) This evaluation captured patients and public perception on a new predictive and preventive supported self-care model (AICC) for patients at high risk of unplanned care. The AICC model contains both elements of automated (AI/Machine Learning) patient-data handling and decision making and elements of personalised, nurse-lead, remotely delivered supported self-care. Novel elements from a patient and public perspective include the concept of automated data screening and patient selection, the proactive contacting of patients at risk and the concept of a nurse-lead remote self-care intervention.
- 2) The high level of supportive responses to the service model from Group A was to be expected and to see a similar response from Group C suggests that the approach would be welcomed and well accepted by patients with long term conditions given the chance and using the most effective approach.
- 3) Reflecting on the experience of hosting all 25 discussions was the frequent link people made between physical ill health and mental ill health and the importance and value to progressing them both in tandem as part of building self-care skills and competencies.
- 4) The service had a clear mental wellbeing benefit for some of the people interviewed which was not obvious and necessarily apparent





until people explored what was making the difference for them. This value and benefit can easily be overlooked in an evaluation, but using this model of gaining feedback helps to identify this attribute of the service.

- 5) The results reveal minimal concerns about the reviewing of clinical records for the purpose of helping to identify people with additional and changing clinical needs. It would be important to take steps to maintain this trust through high and transparent standards and processes.
- 6) The approach adopted in this work produced a substantial volume of granular patient insights from participants from different parts of England.
- 7) Comments and feedback on evaluation were primarily directed towards evaluating the impact the service had on the confidence and capability of service users to self-manage their conditions and improve in the longer term the associated behaviours.
- 8) Only one person out of the 25 was from a non-white British background. It is hardly surprising therefore that issues and concerns about race, faith ethnicity and culture hardly featured in the feedback. This remains an area of unmet health and social need and requires further and determined consideration to grow the impact and valuable contribution of this service into the future.
- 9) The results show that a semi structured 1:1 conversation approach, can be successfully used to collect ongoing patient feedback and over time to capture insights, progress, and opportunities for service development and drive continual quality improvement.
- 10) No significant issues were raised concerning the time limited provision of the service subject to discussing the graduation process with the user involved and providing some form of 'just in case' safety netting.
- 11) Whilst everyone actively participated in a discussion, there were some more enthusiastic than others. Those in Group C, known to the interviewer were most engaged in the process and those in Group B, those who had declined to take up the service, were least engaged. These are in line with expectations.





- 12) The coding of responses enabled a qualitative and quantitative comparison across the three groups and enabled the frequencies of topics to be identified.
- 13) The results show the value and benefit of authentically involving additional people who do not use a service but may be one day eligible for a service to see their novel views and opinions to help ensure continual improvement and development of a patient centred approach.
- 14) Eight of the 25 participants expressed an interest in participating in further service development work and these were people from across all three of the patient groups.
- 15) On reflection it may have been easier to have fewer codes with broader definitions to produce the narrative of the results.
- 16) The quotes collected through this approach provide useful insights into additional strategies to overcome barriers to better self-care.
- 17) It would be good practice to establish a formal process and log of changes made to all promotional materials, processes, systems, and training in response to this.

7. Recommendations

- 1) Work with a group of the Clinical Coaches on the **intervention** feedback and devise ways to address and embed this more effectively. For example, supporting confident independence and positive motivation.
- 2) To consider all the **invitation to participate** feedback and compare this with current processes and procedures – how can this be improved to gain a higher positive commitment from patients to participate?
- 3) Review the **onboarding** approach and take into consideration the feedback and the changing environment as lockdown is eased – what additional or new approaches would be most effective?
- 4) Regarding the **concept of AICC** consider how this can be more clearly distinguished and differentiated from local services such as





social prescribing to help enhance and clarify the HN AICC brand and what sets it apart from the rest.

- 5) Review and seek to improve the transparency of the **manual clinical review** process to build trust and enhance the person-centred values of the organisation.
- 6) The feedback, and in particular the positive feedback obtained through this work, is shared with all those involved in HN to provide this service, everyone, because everyone makes a valued contribution to the outcome.
- 7) HN to produce appropriate material based on this report to share with current clients and prospective clients to showcase the patient centred approach and the patient experience and expectation of the HN AICC model.
- 8) For HN to use this report to identify and prioritise for action areas of strength to be showcased, areas of weakness that need to be addressed urgently and areas where further improvement would improve the patient experience and patient outcomes. This work should form the basis of a response to the report and be widely shared.
- 9) To work directly with the Yorkshire & Humber AHSN communications team to raise national awareness of the approach and the patient feedback on how this is meeting needs and expectations. This should include opportunities to refine and hone the approach.
- 10) For HN to agree in principle to a follow up work plan for those who have expressed an interest in an advisory group and progress this work in earnest to retain the current level of interest and support. Take the first steps by setting up the group and the Terms of Reference as well as having a forward work plan.
- 11) To incorporate and include this work as part of the social media campaign for the organisation with a dedicated plan of social media-based activity. (Including Yorkshire & Humber AHSN and HN Advisory Board members)
- 12) Consider potential events where this insight would make a valuable contribution to more effective and more patient centred population health management activity.



Appendix 1

The Requirement

The requirement was an independent report of patient and public feedback and insight, conducted by Yorkshire & Humber AHSN on behalf of HN. The expectation being that this work will be led by the Patient and Public Involvement lead of Yorkshire & Humber AHSN to yield:

- A poster or paper suitable for peer reviewed submission and publication.
- A process and approach to enable HN to involve patients and the public continuously and authentically in the service and product design development and deployment.

On March 8th, 2021, at a meeting with Graham Prestwich, Yorkshire & Humber AHSN, Prof. Theo Arvanitis, Institute of Digital Healthcare, WMG, University of Warwick, Joachim Werr, Founder and Executive Chair HN-Company and Kem Okupa Project Manager HN the outline approach agreed was:

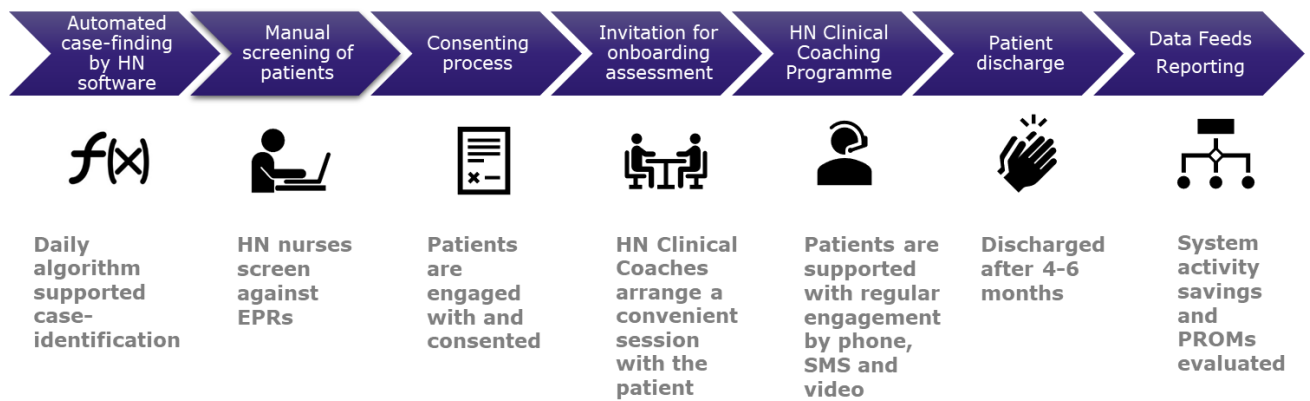
- Structured interview approach: approximately 30 individuals representing three different groups (those already receiving the HN service, those offered but rejected, those not offered but potentially exposed to the future service offer, etc.)
- Summarised in a report authored by the Yorkshire & Humber AHSN in collaboration with HN staff.
- To structure the interviews around the process flow of the HN intervention “AI-guided clinical coaching”, using the linear process model, considering each step separately.





Appendix 2

Process flow for AI-guided Clinical Coaching



Appendix 3

Quotes from participants

Many people provided valuable quotes illustrating their understanding of the approach and their passions and interest in further improvements. These included:

"You don't recognise your own ability until someone works it through with you."

"I don't want to know what I cannot do I want to know what I can do."

"Creating the atmosphere for me to be able to do in a confident and comfortable way something that is neither comfortable or easy to do."

"Does it cost?"

"You need some new bloods, and new heads, and new ideas, along with radical thinking to make it"

"Maria, we [my wife and I] are really grateful and appreciate all that you have done for us."

"People (NHS people) tend to write us off as we get older."

"I was supposed to be booked in to see my GP and when I got there, I ended up with a nurse."

"In the NHS they just want to get rid of you"

"Hugely inappropriate to determine your needs simply based on your age."

"One of the biggest causes is loneliness and isolation and the strong link between mental ill health and physical ill health"

"I don't like the use of the term coaching!"

"Concerned about the quality and accuracy of medical records"

"How is the carer contribution assessed throughout?"

"Generalisation - I generally find that people who have problems with that (secondary use of health data) are usually people from within the service, both health and social care."



"What else can we solve because now I am a trusted partner in this set up."

"A person doing home visiting must have good and up to date safeguarding training."

"Important to have good caseload supervision processes well established."

