



University of Glasgow | Nursing & Health Care



Keep well

Exploring Health Professional Competencies in Keep well Planned Consultations (North & East Glasgow)

Final Report

December 2010

Contents

| | |
|---|-----------|
| Executive Summary | 3 |
| 1. Introduction | 4 |
| 1.1 Background..... | 4 |
| 1.2 Setting and rationale | 5 |
| 2. Methods | 6 |
| 2.1 Design..... | 6 |
| 2.2 Recruitment | 6 |
| 2.2.1 Recruitment Difficulties..... | 7 |
| 2.3 Participants..... | 9 |
| 2.4 Data collection..... | 9 |
| 2.5 Measures..... | 10 |
| 2.6 Ethics..... | 11 |
| 3. Findings | 12 |
| 3.1 Literature Review & Competency Framework..... | 12 |
| 3.2 Data Analysis – Main Findings..... | 14 |
| 3.2.1 The Content of the Keep well Consultation | 14 |
| 3.2.2 Participant Perspective of the Keep well Consultations | 21 |
| 3.2.3 Findings Compared to Competency Framework..... | 26 |
| 4. Discussion and Recommendations | 28 |
| 5. References | 30 |
| Appendices | |
| Appendix I: Information Sheets..... | 31 |
| Appendix II: Study Measures..... | 36 |
| Appendix III: Literature Review: Competency Framework | 41 |
| Tables | |
| 2.1: Reasons for Declining to Participate in Study..... | 8 |
| 2.2: Health Care Practitioners and Patient Demographics..... | 9 |
| 3.1: Description of Consultation Lengths and Other Timings..... | 14 |
| 3.2: Average CARE Measure Scores Scored by Individuals for each Health Practitioner..... | 18 |
| Figures | |
| 2.1: Recruitment Flow Chart..... | 8 |
| 3.1: Outline of Competency Framework..... | 13 |
| 3.2: Clinical and Lifestyle Risk Assessment Data Collection..... | 17 |
| 3.3: Comparison of CARE Measure, BECCI & SOLER Scores by Length of Appointment | 18 |

| | |
|--|----|
| 3.4: Comparison of All Consultation BECCI Scores by Researcher..... | 19 |
| 3.5: Comparison of BECCI Scores by Length of Appointment | 20 |
| 3.6: SOLER Technique Scores for Keep well Consultations..... | 21 |
| 3.7: Thematic Analysis of Participant Perspectives of Keep well Consultation..... | 22 |
| 3.8: Linking the Competency Framework to the Study Data..... | 27 |
| 4.1: Linking Competency Framework to Study Recommendations..... | 29 |

Executive Summary

Background: A key evaluation priority for the anticipatory care project, Keep Well, was to capture a better understanding of the core competencies required of health practitioners (HPs) to deliver Keep well and investigate how existing practice approximates to this.

Study Aims:

1. Define the core consultation competency framework required of HPs to deliver Keep well objectives.
2. Document the extent to which observed practice within Keep well consultations fits within this framework.
3. Determine, from the perspective of the individuals attending and the HPs delivering Keep well consultations how closely their experience fits with this competency framework.

Methods: A qualitative approach was adopted. An initial literature review was conducted to define a competency framework for HPs conducting Keep well consultations. Ethics approval was granted. Data was collected from observing filmed Keep well consultations, interviews with HPs and patients, and the Consultation and Relational Empathy Measure (CARE). Analysis of filmed consultations used validated tools (Behaviour Change Counselling Index [BECCI] and SOLER measure of non-verbal communication skills). Observations and interviews were thematically analysed using NVivo software programme.

Findings: Key consultation skills from the literature review were an understanding of psychological concepts of behaviour change, communication skills, and patient-centred counselling skills. Six HPs were recruited from four Keep Well general practices in two NHSGGC CHCPS and 16 consultations observed. The consultations consisted of a structured approach; providing information, advising behaviour change and referral to other agencies. Results of the CARE measures (average score 45.8 (SD 4.8) indicated empathy was highly evaluated by patients. However low BECCI scores (average score 1.2 SD 0.5) and analysis of filmed consultations suggested there was little use of the patient led approach as described in the literature.

Conclusion: HPs' good communication styles could be better utilised to develop brief negotiation counselling skills. Introducing feedback / supervision into training methods are recommended to improve these skills. The study identified barriers in relation to delivering the consultation therefore review of structures and processes could potentially reduce barriers to implementing a more patient centred approach.

1. Introduction

Strategies aiming to improve life expectancy are multi-faceted and varied. Currently there is a greater emphasis on a structured approach to identify those individuals at higher risk of cardiovascular disease. Interventions, include supporting all individuals to improve lifestyle behaviours and offering evidence based pharmacological interventions to reduce cardiovascular risk in those assessed to be at higher risk. In the UK this is conducted mainly in primary care, and in Scotland general practices in areas of high deprivation are targeted. It is therefore important that health care practitioners, who are conducting screening consultations, have the attributes necessary to achieve the most effective outcome. This study determined to identify a competency framework from the literature and then describe how closely these proven skills and knowledge approximates to current practice.

1.1 Background

Cardiovascular disease (CVD) is the leading cause of death in the western world. People living in deprived areas of Scotland are more likely to die from coronary heart disease than those living in more affluent areas with the poorest having a five fold risk increase compared to the most affluent (The Scottish Government, 2008). To tackle the health inequalities in Scotland the government launched Keep well in 2006. Keep well is based on an anticipatory care model, helping to prevent disease by reducing associated risk factors. Anticipatory care involves providing care and services for people who present with a high risk of future cardiovascular disease but as yet have no disease symptoms. Many of the risk factors related to cardiovascular disease are lifestyle choices that can be altered such as: smoking cessation, improved diet, increased activity and reducing alcohol consumption to safe levels (Fowler et al, 1993).

The policy document Better Coronary Heart Disease and Stroke Care (The Scottish Government, 2008) places NHS workers in the role of 'creating the conditions in which people have the confidence, motivation and ability to make healthy choices and providing professional services and support'. Under Keep well individuals aged 45-64, living in the most deprived areas of Scotland, are invited for a health check and lifestyle advice by their General Practice (NHS Health Scotland 2010). Diverse approaches to both encourage attendance and improve access to diverse health improvement services were implemented and evaluated. However the process within the health check consultation itself were less well studied. The health check involves clinical checks such as measuring blood pressure and evaluating lifestyle risks for

cardiovascular disease. It is acknowledged that making lifestyle changes to behaviours which are risk factors for heart disease is as important as medicinal treatment (Paul et al, 2004). Consulting on lifestyle change involves using brief behavioural counselling techniques derived from Motivational Interviewing (Miller & Rollnick, 1991). This type of consultation requires particular skills over and above basic communication skills. The NHS Knowledge and Skills Framework provide a structured approach to defining the competencies required for nursing and health professional posts (DH 2004). Within this framework are;

- core dimensions such as communication
- specific dimensions including health and well being.

This is a useful starting point at which to explore the competencies needed for an effective Keep well consultation. Other attributes such as performance, attitudes and values should also be considered.

The structure of the Keep well consultation In NHS Glasgow & Clyde (NHSGGC) is defined by a standardised computer based template. This includes interviewing and measuring to determine an individual's health status, in particular to estimate their risk of cardiovascular disease. Interviews are conducted by health practitioners to assist Keep well participants to recognise risky lifestyle behaviour, discuss readiness for change and refer when appropriate to appropriate health improvement teams. The Keep well anticipatory care consultation is an essential component of this national pilot project. The research questions therefore aimed to explore the competencies needed and used by health practitioners to provide an effective consultation.

1.2 Setting & Rationale

A key evaluation priority, identified by the NHSGGC Keep well evaluation and sustainability group, was the need to capture a better understanding of the core competencies required of health professionals delivering the clinical Keep well consultation and how existing practice approximates to this. This study was conducted to provide answers to these evaluation questions, specifically on areas of north and east Glasgow where Keep well as anticipatory care is being piloted in a number of General Practices located in deprived areas in Scotland.

2. Methods

2.1 Design

The study aims were threefold:

1. Define the core consultation competency framework required of health professionals to deliver Keep well objectives.
2. Document the extent to which observed practice within Keep well consultations fits within this framework.
3. Determine, from the perspective of the individuals attending and the health care professionals delivering Keep well consultations how closely their experience fits with this competency framework.

As the study aims were exploratory and descriptive, a qualitative approach was appropriate. Data was collected using a combination of questionnaire, interview and observation methods, which were analysed using established qualitative techniques.

2.2 Recruitment

Recruitment to the study took place over three stages and was carried out between January and November 2010.

Inclusion and Exclusion criteria

Health practitioner (HP) inclusion criteria:

- Employed in a Keep well General Practice in the north or east Glasgow Community Health and Care Partnerships who have agreed to take part in this research project.
- Experience of conducting a minimum of five Keep well consultations prior to taking part in the research project.

Patient inclusion criteria:

- Either Sex
- Aged between 45-64
- Registered with NHS Keep well General Practices in north or east Glasgow CH(C)Ps.
- Arranged to attend a Keep well consultation with a health practitioner recruited to the research project from a General Practice agreeing to take part in this research project.
- English as first language.
- Able to give informed consent.

General Practice Recruitment: A total of 35 general practices taking part in Keep well, from North and East Community health and care partnerships (CH(C)Ps), were identified to the researchers. Each practice manager was sent a recruitment pack including a letter to individual general practitioners, information about the study and a reply slip to indicate interest. If no reply was received after two weeks, the research assistant contacted the practice lead by phone to confirm receipt of the pack. Practices who expressed an interest in taking part agreed that a letter with further information be sent to the HP(s) delivering Keep well appointments directly.

Health Practitioner Recruitment: Individual HPs from those practices who had given permission were sent an invitation letter, HP information sheet (Appendix 1) and reply slip to confirm or decline interest in taking part. Interested HPs who so wished received a visit from the researcher at their general practice to explain the study in more detail and were given a chance to ask questions, after which formal consent was obtained.

Patient Recruitment: Participating HPs identified to the researcher patients who were eligible to have a Keep well appointment. Exact procedures for identification and invitation of patients for Keep well appointments varied between practices and usual procedures for patient invitation were followed. Patients were sent an invitation letter and information about the study either at the time of the initial Keep well invite or after having received their Keep well appointment letter (Appendix I). A reply slip and stamped addressed envelope were provided to allow them state whether or not they were interested in taking part in the study. Interested patients were requested to attend for their appointment fifteen minutes early to allow the opportunity to ask questions and take formal consent.

2.2.1 Recruitment Difficulties

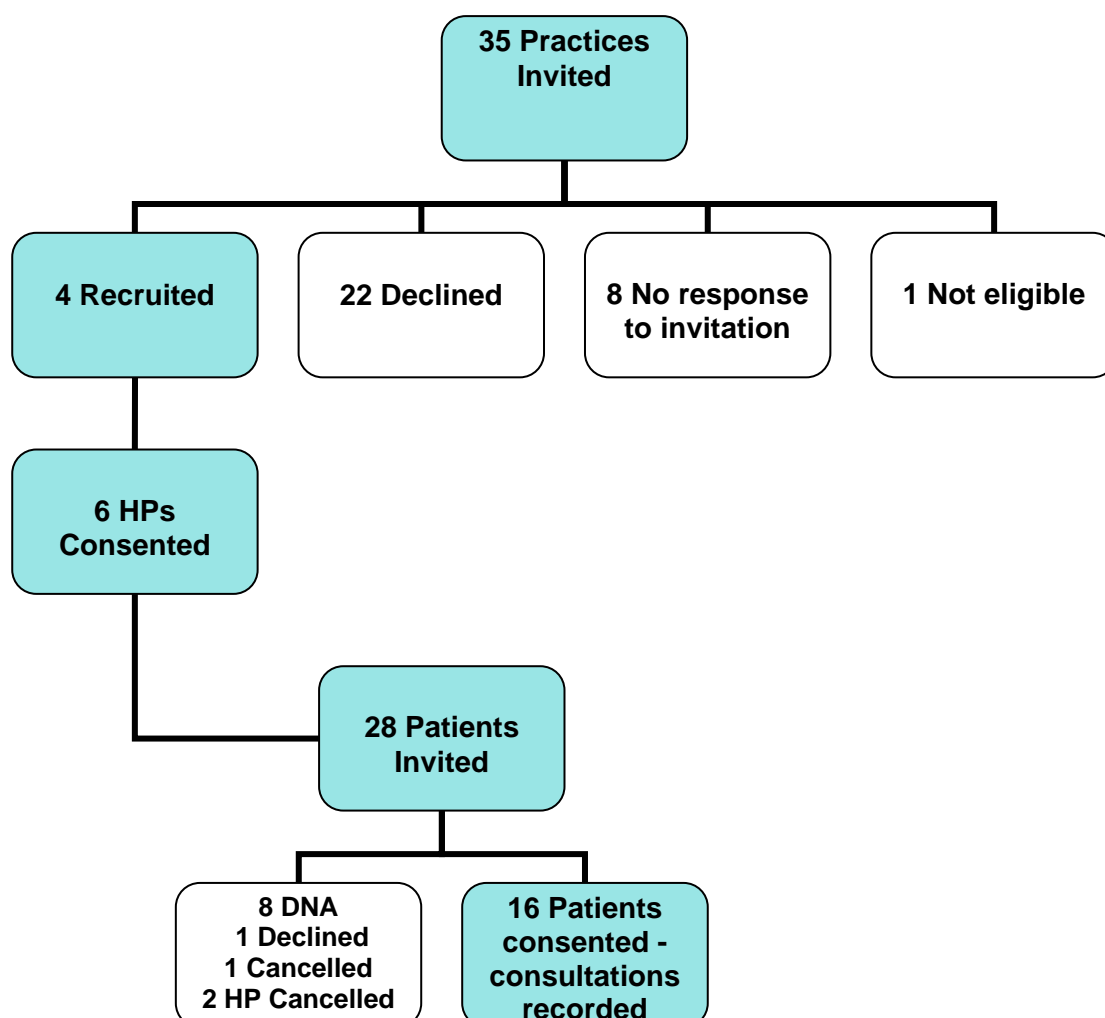
Recruitment to the study was challenging due to a number of complex issues. Firstly, there was a lack of direct access to HPs and a significant number of practices declined permission for the researcher to contact the HP (reasons for declining were provided by most practices (n=22) as outlined in table 2.1 below). Secondly, a reluctance to be filmed became apparent as a major reason for refusal at an early stage. Due to this, the researchers obtained an amendment from the ethics committee to allow practitioners to choose to be audio recorded as an alternative to being filmed. The general practitioners were informed of this change by letter. Despite this, audio recording was not taken up as an option by any of the HPs,

suggesting the issue was with being observed. A number of the sample practices (n=8) failed to respond to the invitation, phone call and/or e-mail follow up.

Table 2.1: Reasons for Declining to Participate in Study

| Reasons for Declining by General Practices or HPs | No of Practices |
|---|-----------------|
| HP not wishing to be filmed / recorded. | 8 |
| Practice felt not enough time for HP to undertake this. | 5 |
| Already taking part in other research. | 2 |
| Felt not appropriate to interfere with appointment – too sensitive / complex. | 2 |
| Not comfortable taking part. | 1 |
| Responded but declined participation without reason. | 4 |

Figure 2.1: Recruitment Flow Chart



2.3 Participants

The final sample recruited from these procedures was 4 general practices, 6 HPs and 16 patients. HP and patient demographics are given in table 2.2. Despite the intention to include a cross section of HP types, the majority of recruited HPs were nurses. This does however reflect the reality that nurses represent the majority of those delivering Keep well appointments. Recruited practices were well spread over North and East Glasgow, Keep well wave 1 and wave 4, and general practice size increasing the generalisability of the findings.

Table 2.2: Health Care Practitioners and Patient Demographics

| Health Care Practitioners | | Patients | |
|--|-----------------------|-------------------------------|-----|
| <i>Role</i> | | <i>Average age</i> | |
| Practice Nurse | 3 | 49 (44-56) | |
| Keep well Nurse | 2 | | |
| Health Care Assistant | 1 | <i>Gender</i> | |
| <i>Gender</i> | | Male | 6 |
| Male | 0 | Female | 10 |
| Female | 6 | <i>Ethnicity</i> | |
| <i>Average Experience Delivering Keep well</i> | 20mths (6mths – 4yrs) | White Scottish | 15 |
| <i>CHCP</i> | | Other | 1 |
| North | 3 | <i>History</i> | |
| East | 3 | CVD | 0 |
| <i>Keep well Wave</i> | | Heart Failure | 0 |
| Wave I | 2 | Diabetes (type 2) | 1 |
| Wave IV | 4 | Hypertension | 3 |
| Practice Demographics | | | |
| <i>No. of Patients</i> | | <i>Deprivation Weighting*</i> | |
| <2,500 | 2 | Practice 1 | 53% |
| 2,500-5,000 | 1 | Practice 2 | 58% |
| >5,000 | 1 | Practice 3 | 72% |
| | | Practice 4 | 58% |
| * % of practice patients living in datazones defines as the 15% most deprived (population weighted) www.isdscotland.org/GPpracs&pop [30/9/2010] | | | |

Initially it was planned to record between 3-4 consultations per HP. However it was clear that the processes and styles of consultation delivered by the HPs were very similar across all patients therefore a maximum of 3 consultations provided sufficient data for the research purposes. One HP was filmed with 4 patients, three with 3 patients each, one with 2, and one with 1 giving a total of 16 filmed consultations. One practice nurse withdrew from further recordings following the first planned consultation due to feeling uncomfortable with the filming. Other HPs reported becoming more relaxed with the recording process after each consultation.

2.4 Data Collection

A camcorder and tripod were used to record the consultations on tape, and were positioned in the consultation room prior to the start of the appointment to capture principally the face of the HP. The HP delivering the appointment was instructed in how to start and stop recording, and along with each patient, was instructed that they could do so at any time during the consultation.

After the consultation, each patient was asked to complete the CARE questionnaire (Mercer et al, 2004) (Appendix II). A subsample of 12 patients and all HPs took part in a semi-structured interview with the researcher. Interview topic guides were developed to explore the experience of the Keep well appointment both the health practitioners and the patient point of view (For interview schedules see Appendix II). Interviews were conducted in a private room within the general practice, and were recorded, with consent, using a digital voice recorder.

2.5 Measures

General Observations

General descriptive observations were collected for each of the recorded consultations including length of consultation, time (in minutes) spent;

- looking at the computer screen
- directly looking at the patient.

In addition researchers recorded extensive notes while observing the taped consultations observing;

- HP and patient interactions
- clinical and health improvement data collection.

CARE measure

Each patient completed the CARE measure (Mercer et al, 2004), a brief questionnaire which is a validated tool used to evaluate the person-centeredness of a primary care consultation, looking at processes rather than the outcome. The measure is designed to be completed by patients and is therefore worded to be comprehensible to a wide audience.

The Behaviour Change Counselling Index

A known component of the Keep well consultation is assessment and counselling of readiness to change health behaviours. The Behaviour Change Counselling Index (BECCI) was used to examine the content of the filmed consultations (Appendix II). It is a checklist to assess HPs' aptitude in brief behaviour change counselling in a quick

one-pass assessment of a recorded consultation and contains 11 items scored on a likert scale (not at all - a great extent) to reflect the degree to which the action is carried out. It concentrates on the activities of the practitioner and not what the patient is saying. It has been found to have good internal consistency, inter and intra-rater reliability, and responsiveness to change before and after training (Lane et al 2005). A BECCI score for each consultation is obtained by adding the scores of all 11 items and dividing by the number of items (score range 0 - 4). Where items are rated as non-applicable, a method of mean substitution is used to obtain scores for these items, as recommended by Lane and colleagues.

To ensure consistent use of the BECCI, a pilot was conducted to assess inter-rater reliability of BECCI ratings using simulated consultations. Having consulted the manual for use, three raters, experienced in motivational interviewing, independently rated five clips on two occasions which had been developed as training tools for motivational interviewing skills. The raters were blind to each others ratings. At least a week separated the viewings and raters did not refer back to their previous ratings. All ratings were then entered into a spreadsheet for statistical analysis. Following statistical advice from Harper Gilmore (University of Glasgow) researcher interrater reliability was measured using intraclass correlation coefficient (ICC) (Bland and Altman 1996). The ICC for the BECCI scale was 0.928, indicating a very high level of agreement among raters.

SOLER Technique

The recorded consultations were examined for non-verbal skills demonstrated by HPs. The SOLER technique for assessing micro-skills of non-verbal communication was developed by Egan (1998) and represents skills considered essential for good non-verbal communication: Sit squarely in relation to the patient; have an Open posture; Lean forward at times during the consultation; maintain a natural level of Eye contact; and Relax to put the patient at ease. SOLER provides a tool for assessment of non-verbal communication skills (Chapelhow et al 2005). Each of the five skills were rated on a likert scale (0 not at all – 4 a lot) over the first, middle and final 5 minutes of the consultation. The three sets of scores were added and a total mean score recorded.

2.6 Ethics

Ethics approval was granted for this project by West of Scotland REC 3 (ref no. 09/S0701/93).

3. Findings

3.1 Literature Review to Formulate a Competency Framework

The first aim of the research was to define the core consultation competency framework required of HPs to deliver Keep well objectives.

Literature Review Methods: A comprehensive analysis of relevant literature was undertaken, which was synthesised to form the framework of competencies for health care practitioners in primary care settings. Electronic databases including Ovid MEDLINE, Embase and PsychINFO were searched for papers from the year 2000 onwards. In addition grey literature was searched. This included literature on psychological aspects of health behaviour and behaviour change; communication skills within health care settings; patient centred health care approaches; and skills for motivational interviewing and brief motivational interventions in primary care. In addition, searches were carried out to identify and evaluate existing competency guidelines for HPs in primary care settings.

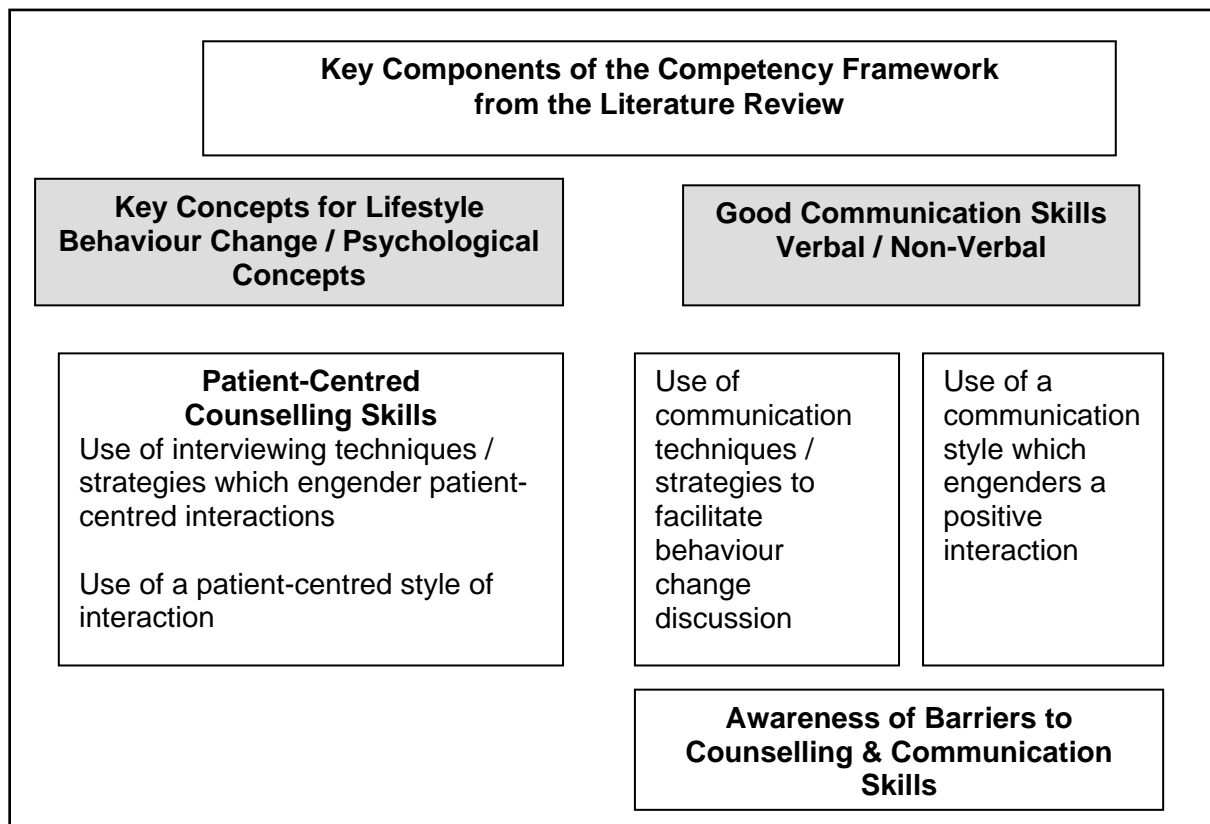
Results: The significant contributory role of modifiable lifestyle behaviours is well established. Lifestyle behaviours such as smoking, excessive alcohol consumption, physical inactivity and poor diet are major risk factors for the development of chronic diseases such as cardiovascular disease, diabetes and cancer. Reducing disease rates of mortality and morbidity through individually assessing and tackling risk factors is a major focus of health programs around the world. In light of the huge numbers of premature deaths caused by these diseases worldwide, there has been an increasing focus on anticipatory health care, addressing risk factors in an attempt to reduce the number of people developing these diseases. Nurses are often at the centre of these efforts, in particular within the context of health checks.

Engaging people in lifestyle behaviour change is not easy, but the counselling style of brief motivational intervention has shown promise in primary health care settings. The efficacy of many different interventions aimed at engaging people in changing lifestyle behaviours has been investigated. Brief motivational intervention- based on the principles of motivational interviewing- has emerged as a promising approach. However, detailed evidence based guidance for nurses delivering motivational interventions were not found in the literature. This literature review brings together relevant evidence to outline a framework of competencies for health care practitioners delivering brief motivational interventions for lifestyle behaviour change in primary care settings. 'Competencies are the skills, abilities, knowledge,

behaviours and attitudes that are instrumental in the delivery of desired results and, consequently, of job performance' (p.14 WHO 2005)

Existing frameworks and guidance do not sufficiently reflect the evidence on specific competencies for motivating patients for behaviour change. The framework of skills and strategies was developed from the evidence base. An overview of the key components of the competency framework is shown in figure 3.1 with the detailed framework discussed in the full literature review found in Appendix III.

Figure 3.1 Outline of Competency Framework



Conclusions: This competency framework will help inform the discussion on the following results reported from the observed planned Keep well consultations in NHSGGC.

3.2 Data Analysis – Main Findings

3.2.1 The Content of the Keep well Consultation

The second aim of the research was to capture the extent to which observed practice within Keep well consultations fits within the competency framework. The findings from the measures used to analyse this HP and patient interaction, as detailed in 2.5 are now described.

General Observations

The length of the 16 recorded consultations varied from 18 to 65 minutes with an observed consistency of length within each of the recorded consultations for individual HPs (table 3.1). The majority of HPs were allocated 45 minutes appointment slots for the Keep well consultation. There were also differences across the HPs in the average time spent looking at the computer screen (3.2 minutes to 18 minutes) and looking directly at the patient during the total consultation time (5.3 minutes to 21.5 minutes) (table 3.1). The observed percentage differences were not associated with length of time in post or type of HP however higher proportion of time looking at the patient seems to be associated with those HPs with the highest BECCI scores.

Table 3.1 Description of Consultation Lengths and Other Timings.

| Health Practitioners (HP) | HP 1 | HP 2 | HP 3* | HP 4 | HP 5* | HP 6* | All HPs |
|---|----------------|-------------|----------------|--------------|----------------|------------|-----------------|
| Average length of consultation time (minutes) | 25.5 SD 7.3 | 62 SD 0 | 48.3 SD 6.2 | 62 SD 0.5 | 33.3 SD 5.4 | 24 SD 2 | 42.5 SD 15.4 |
| Average total time looking at the computer (minutes) (%of total time) | 7.3 30% | 18 29% | 7 14% | 13 22% | 3.6 11% | 3.2 13% | 8.6 20% |
| Average total time looking at patient (minutes) (%of total time) | 5.3 17% | 15.5 25% | 21.5 45% | 20.1 32% | 13.3 40% | 9.7 40% | 14.2 33% |
| % of average total rest of time e.g. clinical measurements, form filling | 53% | 46% | 41% | 46% | 49% | 47% | 47% |
| * indicates HP with the highest BECCI scores Key: SD is standard deviation | | | | | | | |

The researchers made notes on the style of observed taped consultations which were thematically analysed. The main themes were: advice giving; template management, offering referrals, and data collection.

Advice Giving.

Giving advice about lifestyle behaviours throughout all the 16 consultations was a strong recurring theme in the researchers' notes. To the observers this appeared to be the main aim of the HPs' consultation style. Much of the advice was brief and accurate then leading to offers of referral to a health improvement service. However the advice was commonly not overtly sought by patients and there were some signs of passive resistance which were not picked up by the HPs. The most common signs of resistance were minimal responses using yes/no answers, leaning away from the HP and occasionally interrupting. One researcher commented,

“the nurse did not seem to pick up on clues to discuss feelings about issues related to weight and smoking. Went straight into asking about fruit and vegetable portions and when patient said he had none then used a healthy eating questionnaire to explain about diet”.

On the whole the patients were passive participants within the consultation listening to the advice. Even when HPs occasionally used open and curious questioning styles to engage the patients they frequently answered their own questions or did not encourage, or indeed wait, for detailed responses from the patients. Open questioning was the most patient centred approach used with rare examples of reflective listening, affirmation or summarising techniques observed.

Template Management

All the HPs used the Keep well template throughout the consultations, seemingly using it as a helpful guide to the structure of the consultation. This provided a similarity across all 16 consultations with the HPs undertaking clinical measurements followed by closed questions to gain information about lifestyle behaviours and social issues. The nurses used the template to check patients' past medical history, print out both referral and questionnaire forms and provide information. The computer template was mostly introduced by the HP to the patient at the outset as an integral part of the consultation. As such when HPs appeared to be less confident about asking certain questions, in particular financial concerns and alcohol intake, the nurses indicated that they asked these questions because it was part of the “template”.

A subtheme within the template was risk assessment. Possibly as a result of the template indicating that a risk assessment should be done the HPs raised this issue with the patients. Most often this was similar to other information giving, that is providing a standard response. This included explaining that a cardiovascular risk assessment would be done once all the information was available and if necessary the patient would be asked to return possibly for treatment from the doctor. Although the health care assistant did not do this calculation she described the process. On three occasions, with different HPs, patients queried the information provided. Each time the HPs found it difficult to provide the information in a way that seemed to satisfy the patients' queries. One observer note stated:

"The nurse seemed quite uncomfortable. She did a risk assessment and said it would be 14% in the next 10 years. She repeated the score with another tool which gave 10.1%. The patient expressed concern over her increasing cholesterol levels in the last few years and wondering why the nurse isn't able to answer questions on risk scoring and cholesterol. Patient says she will speak to doctor."

Offering Referrals

The final main theme identified from the notes was the emphasis on referrals. Like advice giving this was observed to be one of the main HPs objectives. The template is designed to support HPs make referrals, not only to lifestyle services but also to diagnostic testing such as spirometry, ECG etc. Most HPs completed the forms while the patient was in the consultation, except HP1 who also had the shortest length of consultation (table 3.1). One observer note described the referral process:

"offers referrals for the sake of it, not stemming from any discussion, tells patient, 'she would benefit' and just ask, 'are you happy with that?'"

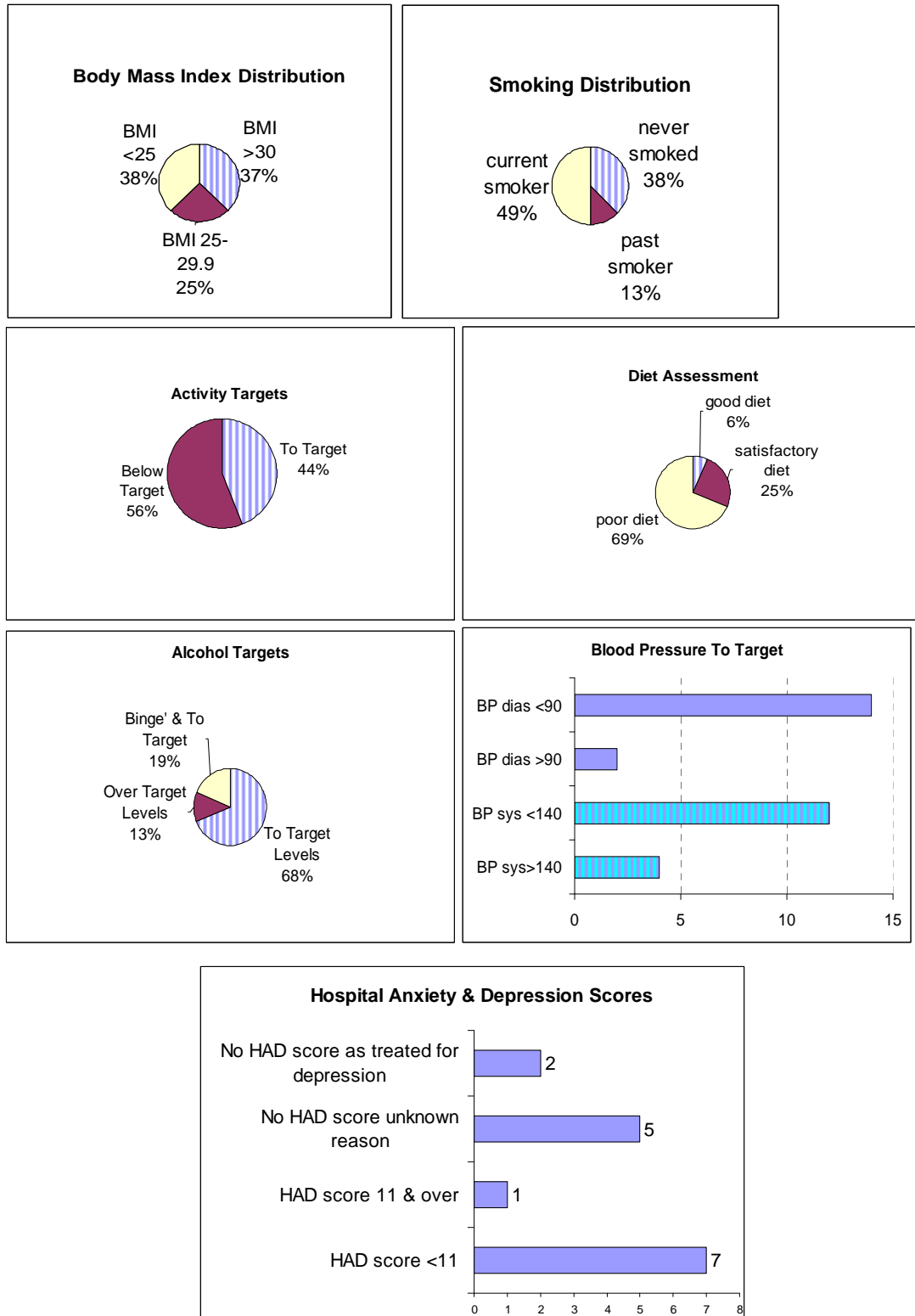
Most consultations resulted in at least one referral however, three referrals to different lifestyle services were observed in a few consultations. There were no referrals to financial inclusion services.

Data collection.

Collecting information took place throughout the consultation however the clinical data was entered into the computer in the early part of the consultation, within first 7 to 15 minutes. It was observed that clinical measurements took longer if shoes were removed or blood pressure measured twice, which was rare. The results of these clinical measurements indicate that most patients were overweight or obese, had poor diets and were smokers (figure 3.2). Thus this cohort represented a cross

section of patients receiving anticipatory care. The lipid results were not available but most female patients would not reach $\geq 20\%$ cardiovascular risk in 10 years, a few of the males might.

Figure 3.2 Clinical and Lifestyle Risk Assessment Data Collection.



CARE Measure

All patients completed the CARE measure on exit from the consultation (Appendix II). The total average score was 45.8 (SD 4.8) out of a possible maximum score of 50. The average for each HP ranged from 41 - 49.3 (see table 3.2). Clearly the patients considered the HPs to show much empathy and care during the Keep well consultations. The CARE scores are shown in figure 3.3 against length of appointment time and other scores.

Figure 3.3: Comparison of CARE Measure, BECCI & SOLER Scores by Length of Appointment.

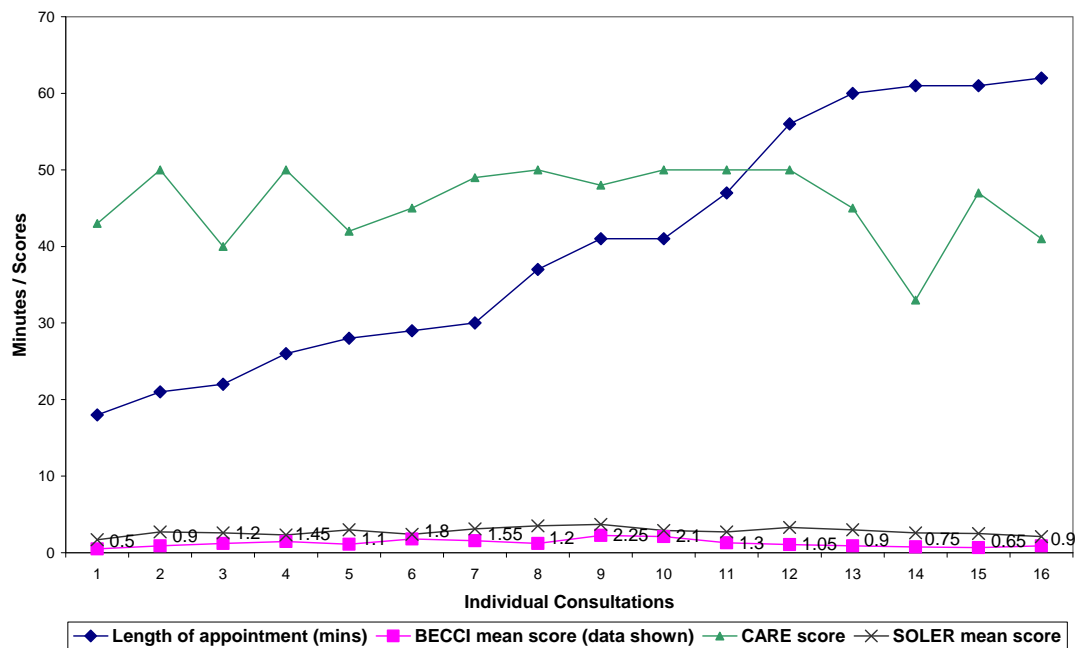


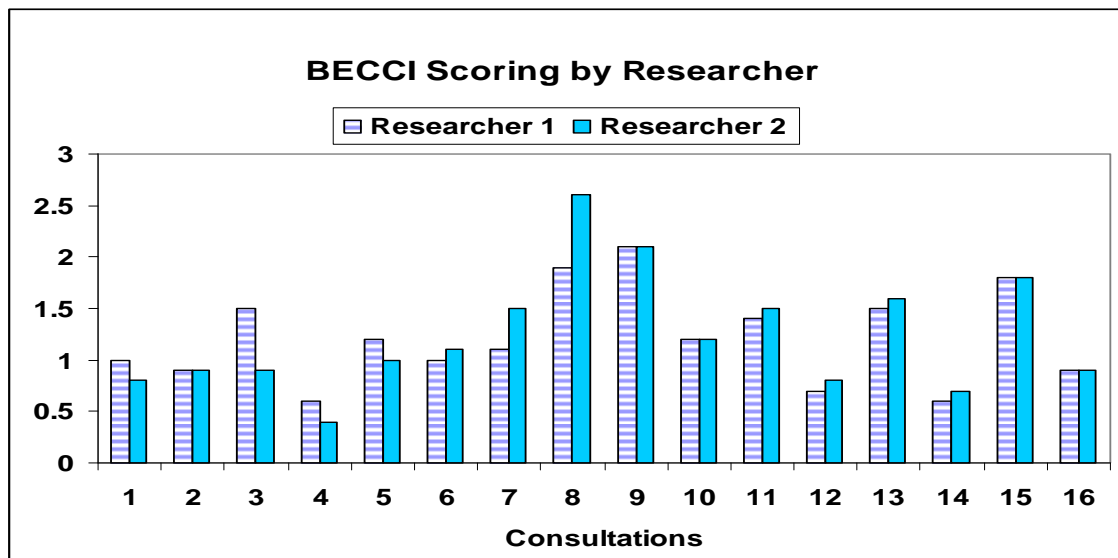
Table 3.2 Average CARE Measure Scores Scored by Individuals for each Health Practitioner.

| Health Practitioners (HP) | HP 1 | HP 2 | HP 3 | HP 4 | HP 5 | HP 6 | All HPs |
|--|----------------|------------|----------------|--------------|----------------|------------|----------------|
| Average CARE Measure Score | 46.2 SD 3.8 | 41 SD 0 | 49.3 SD 0.9 | 48 SD 6.1 | 41.6 SD 2.1 | 45 SD 5 | 45.8 SD 4.8 |
| 10 items range 0-5 (poorexcellent) | | | | | | | |

The Behaviour Change Counselling Index (BECCI)

The two researchers independently scored all 16 consultation tapes with the 11 BECCI items. Although the total scores were similar for both researchers (see figure 3.4) individual items were scored differently for each consultation between the researchers. On one occasion there was a marked difference in total scores (0.4 and 1.1), therefore both researchers rescored the recorded consultation blind and one researcher reduced the score to 0.6. The ICC (as described in section 2.5) was repeated with the study BECCI scores and found to be 0.86. This indicated a high level of agreement although not as high as the ICC in the pilot study. This was due mainly to this set of 16 consultations being much less variable than the set used in the pilot study. This has an influence since ICC assesses the level of variability between the two researchers relative to the "true" variability between the consultations themselves. The average of both scores was used to describe use of brief negotiating skills.

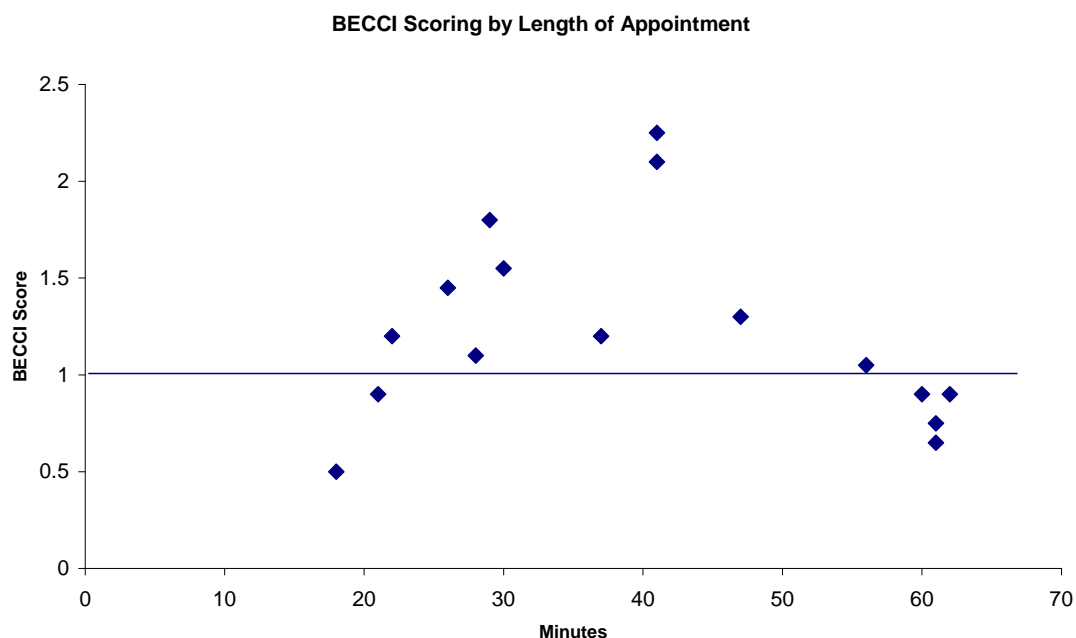
Figure 3.4: Comparison of All Consultation BECCI Scores by Researcher



The average BECCI score from all consultations (n=16) was low at 1.2 (SD 0.5). This suggests minimal use of a patient centred style of behaviour change counselling (figure 3.5). Although the results of the literature review considered this to be an effective lifestyle change style of counselling only two of the HPs in this study had received formal training on brief negotiation skills and techniques. One received training over 5 years ago and one had attended a half day introduction, however their average scores were not the highest. Average individual HP scores ranged from 0.76

(SD 0.1) to 1.8 (SD 0.2). The BECCI scores for individuals had little variation suggesting HPs used a similar counselling style with different individual patients.

Figure 3.5: Comparison of BECCI Scores by Length of Appointment

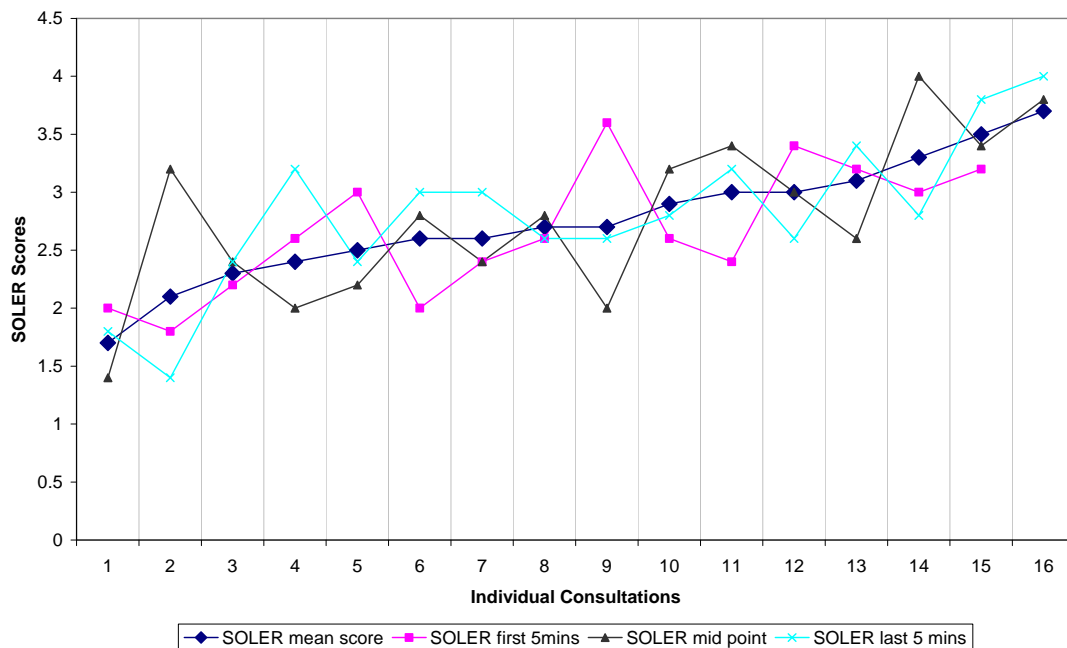


It is worth noting that longer consultations did not result in higher BECCI scores (see figure 3.5). There is a tentative correlation with the BECCI scores to the length of the appointment, which as a secondary finding is worthy of further exploration in a future study.

SOLER Technique

Each of the 16 consultations was assessed for non verbal technique using the SOLER scoring system (see section 2.6). The total average score for all consultations was 2.75 (SD 0.5) with a possible maximum score of 5. Overall each of the five non-verbal techniques was used well throughout the HP consultations (figure 3.6). The average SOLER score from each HP ranged from 2.1 to 3.2. The item that was generally less well scored was sitting squarely. This seemed to be due to the frequent use of the computer's mouse throughout the consultation resulting in the HPs twisting in their seat to enable periods of eye contact with the patient.

Figure 3.6: SOLER Technique Scores for Keep well Consultations



Key: S= Sitting Square, O=open posture, L=lean slightly forward, E=eye contact, R=relaxed

Scoring System: Not at all (0).....a lot (4) thus maximum score is 4

Summary

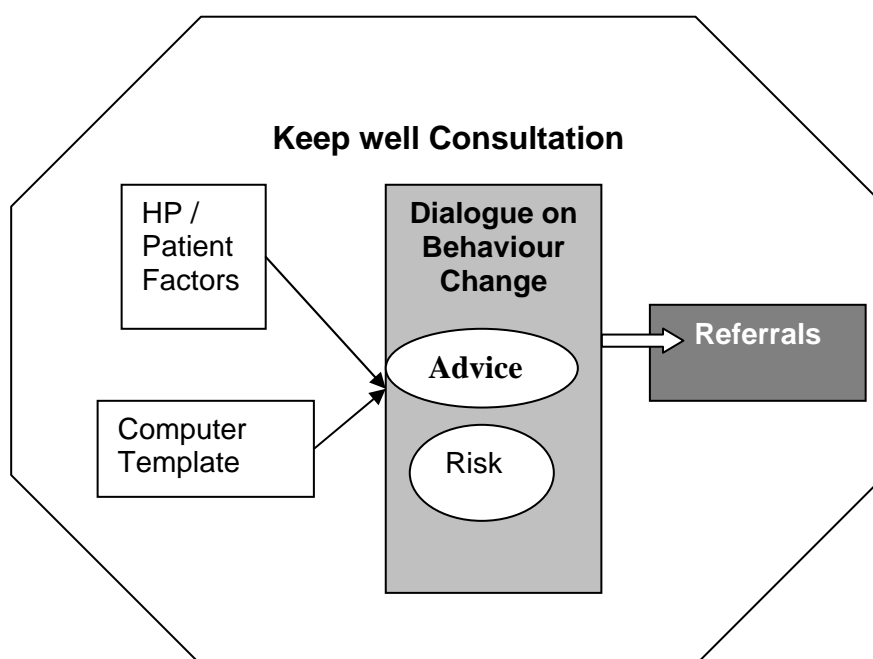
The patients attending had no history of cardiovascular disease, represented the younger end of the age range for Keep well, and at assessment at least one lifestyle risk was identified. From the measures the HPs demonstrated good nonverbal skills and exceptionally well developed skills assessed by the patient’s CARE measure. The BECCI score suggests that the HPs are less familiar with the skills and techniques used in brief negotiation.

3.2.2 Participant perspective of the Keep well consultations

The audio-taped interviews were transcribed verbatim for analysis. Using conventional content analysis the process began after the first few interviews. Members of the research team individually read the transcripts and discussed the findings and grouped salient points into themes. NVIVO software was used to build these themes to convey a comprehensive description of the thoughts, insights and perceptions of the individuals attending and HPs delivering Keep well consultations. The main themes were identified (figure 3.7) and described below. The interviews invited participants to discuss the Keep well consultation using semi structured

interview (Appendix II). Within this context perceived views on the style of the Keep well appointment were frequently raised. HP and patient factors and the computer template were considered important influences upon dialogue about healthy behaviours. Most interviews conveyed the importance of advice giving within the dialogue, risk assessment also featured highly. HPs expressed the importance of making referrals as an outcome to the consultation, to health improvement services and to other medical services. Only some patients reflected upon the referrals that had been offered or given.

Figure 3.7: Thematic Analysis of Participant Perspectives of Keep well Consultation



Keep well Consultation

A number of HPs commented on how the presence of the camcorder may have affected how they performed initially. However this was not raised as an issue in subsequent interviews. Patients felt uninhibited by the camera, *“I felt totally comfortable. Didn’t feel there was a camera there or anything.”*

Most patients considered the consultation to be what they had expected:

“I thought it was just an overall picture, which I think it was to be honest that’s what it was. Just getting to know me as a person, and also what kind of medication and health issues I’ve got, and it covered everything I was hoping for”

One patient had expected more intensive heart tests.

The longer length of appointment was highly valued by both the HP and patients.

“You know you’ve got the time to discuss, basically everything as well as your, Keep well. Anything that’s concerning them. But if you tend to go for a five-ten minute appointment its like oh right, bloods done, bye.” [HP]

The HPs considered longer Keep well appointment times were necessary to be able to complete the template, provide advice and refer to services.

Health Practitioner / Patient Factors

The HPs frequently commented on the characteristics of patients which they felt impacted on their ability to complete a successful Keep well appointment. Most patients were considered to be receptive to changing lifestyle but not always. In particular HPs thought that having identified someone who was not motivated it was best not to pressure them in case it would affect future contacts.

“I feel, sometimes, like in these kind of deprived areas, we have families, and sometimes if you push them in a direction, they’re gonna, dig their feet in and say no. So sometimes it’s trying to get the balance between encouraging somebody and not putting them off. Not getting their back up.”

Pushing them in a direction often meant towards a referral. Some patients in the interviews made it clear this was not an option for them.

Patients described the HPs as very relaxed and interested in them holistically, even comparing them to HP seen in the past who they considered to be less receptive to their needs. Terms used to describe their characteristics include;

“She was really very nice through everything.” [patient] “Just felt comfortable, she was quite approachable.” [patient]

HPs confidence in delivering the Keep well consultation seemed to influence the style of dialogue. Two of the practice nurses commented that they felt well prepared to deliver a Keep well consultation. One stated,

“I obviously attended sort of Keep well meetings but I don’t know if I’ve been to specific training I mean what we do in our job generally is kind of what I’m doing anyway so although I’m kind of, sort of took on this role, there wasn’t really anything different in this role that I would feel that I do different from my day to day job” [HP]

However many were less confident, particularly when it came to explaining to patients about the risk scoring. Most of the preparation for delivering the service was related to using the template and how to refer to health improvement services.

Computer Template

HPs valued the template as a resource, a structure to the consultation and managing follow up. To some HPs it seemed as if the template represented Keep well, even using an explanation about the template to define the style of the consultation to patients. However the HPs identified that the template order was not logical. They described entering data about levels of smoking, BMI etc early in the consultation but levels of readiness for changing risky behaviours associated with these measures were further down the template. As a result most HPs found it easier to deliberately stall any cues raised by patients for discussion on these topics until later.

In their interviews a few patients commented on the presence of the template but did not consider it to interfere with their interaction with the HP. In fact one patient considered it to be beneficial;

“she just started asking questions and she was on the wee computer putting it in so and writing them down. So that’s how I knew she was listening. Unless she was making numbers up (laughs).” [patient]

Dialogue on Behaviour Change

All participants highlighted that much of the consultation content was about lifestyle and risky behaviours. The HPs considered it necessary to explain a similar amount and type of information to all patients. One nurse described her approach as;

“Yes, I went through the risk factors. I told her all about the risk factors, her cholesterol and how we calculate it. I do that with everybody regardless.” [HP]

Although most patients liked the way the HPs explained things and gave them ideas on how to change, for some it was challenging particularly in relation to excess alcohol. For example;

“I thought oh don’t say I’m an alcoholic! But she said no, its binge drinking, because you don’t go out much. So obviously I’ll need to think about that as well.” [patient]

Advice

It was clear that HPs considered advice giving to be an essential component of the Keep well dialogue. They describe highlighting risky behaviours, providing written

information, and talking through ways to change in terms of a successful consultation. There was a consensus that the patients were on the whole open to suggestions for change and pleased to receive this advice. They also acknowledged that many patients already knew a great deal but by giving advice it could 'kick start' small changes for the better.

Many patients described the advice in complimentary terms, suggesting that the HPs advised where in the past similar information had been dictated to them, one patient said *"she (HCP) lectures you in a way. But she doesn't dictate to you in that same way.....I find her easy going"*.

Interestingly the language used in the interviews was often higher in the motivational interviewing change talk hierarchy than in the taped consultation. For example;

"If possible, I will try and cut it down cause I know I need to cut it down for my health wise anyway my smoking anyway. When I'm drinking I know that"[patient]

Cardiovascular Risk

Discussion about cardiovascular risk was less well described by both patients and HPs. There were differences in how providing the risk score was organized within different practices. In only one practice were blood results available to be able to provide an accurate score, in others the practice would contact the patient if treatment was indicated. One HP described this in detail:

"I just tried to explain to him (patient), at what levels the doctors would treat it, so at 30%, for the health board it would be treated, 20% in this practice the GPs would treat it but he's 10%. So I said although it's low, the fact if you're smoking and you know, your diet can put it up, so I kind of tried to get the points across, but I don't know."[HP]

The patient she was describing raised risk in his interview;

"And she gave me the relevant information you know what I mean, and, 10% for the stroke and heart attack I think that's, that's ok, I'll take that"

"So she gave you a risk score calculation"[interviewer]

"Yea, 10% that's ok, I'll take that and just hope, the big man upstairs looks after me (laughs)"[patient]

Referrals

Like advice, both from the researchers' observations of the recorded consultation and the interviews, referrals are considered a key component of the consultation. The HPs point out the risky lifestyle behaviours and provide the patient with the option of referral to other services. A few recognize the difficulty of assessing whether

someone will actually go and ask, *“if I referred you to do this are you going to go?”* Even if the HP recognizes the patient is not yet ready they are either given a leaflet or a telephone number to call. The HPs believe that patients change their minds and will self refer when they are ready. They describe the uncertainty of whether the patient will take up the referral and how this can be very disappointing, especially if the nurse felt they were motivated.

However the patients are more reticent about referrals and even when they have signed forms to attend services they either do not raise this in their interviews or appear uncertain. Others indicate that the referral is driven by the HPs, for example; *“She says what we’ll do is, we’ll get your weight under control and then, in that time, we’ll start thinking about giving up the cigarettes as well”* [patient]

Summary

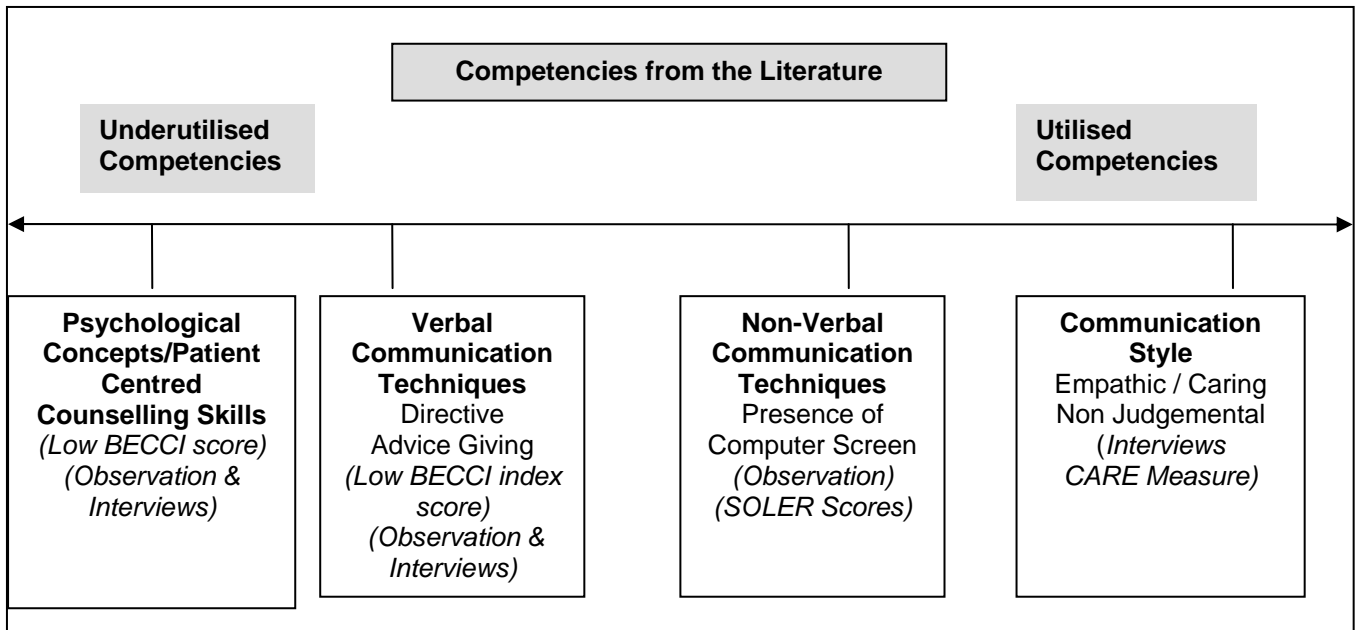
The interviews provided valuable data on how the HPs and patients viewed their consultations. The patients clearly valued the additional time with the HPs and their caring and holistic approach, particularly the way they imparted advice. The HPs also valued the additional time to discuss a wide range of health and social issues. However their approach seemed driven less by the needs of individual patients but more as a standard package of information delivered as advice to patients. This was followed by offers of referral to services. This appears to be in contradiction to the competency framework which suggests the research evidence points away from a directive advice giving approach to a patient led approach (Figure 3.8).

3.2.3 Findings compared to competency framework

By examining the data and comparing this to the key skills and knowledge in the competency framework it can be concluded that some are well utilized while others much less so (figure 3.8). In particular the findings from the CARE measure and the interviews demonstrate that the empathic caring approach used by the HPs is highly valued by the patients in this small study. Non-verbal communication as determined by the SOLER findings were fairly well utilised. However verbal communication techniques to support behaviour change were less well used. There were few examples of effective questioning techniques to explore patients feelings or knowledge about behaviours or picking up on patient cues. There were though good examples of using social conversation where appropriate and giving the patient the amount of information at a time and level which is appropriate to their mental capacity. Some barriers to effective communication were observed in particular expressing strong opinion and offering advice too early.

The most underutilized competency observed were some of the patient centred approaches such as discussion of outcome expectations, negotiating goals / targets and eliciting change talk. However certain aspects were well done including establishing a good rapport with patients and giving clear advice.

Figure 3.8: Linking the Competency Framework to the Study Data



4. Discussion and Recommendations

The data collected was rich and consistent. By capturing the consultation on film the study design allowed in depth analysis of hitherto unknown practice. The participating 6 HPs had a variety of experiences in health screening and supporting behaviour change and therefore, despite the slightly lower recruitment aim of 8-10 HPs, some clear messages were derived from the findings.

First, patients highly valued the empathic caring style of consultation. Yet this, without other skills and knowledge in patient centred approaches within the consultation, is not supported by the research on behaviour change. In addition, one nursing journal editorial by Jaarsma and Stromberg (2009) highlighted that this 'angel like personality' should not detract from the valuable professional contribution that nurses can make. This style of approach enabled the HPs to demonstrate skills in establishing an excellent rapport which could be further nurtured to develop patient centred skills.

Secondly, HPs received little or no supporting education on how best to undertake a patient directive approach to the Keep well consultation. The two HP who had attended courses did not demonstrate translating their learning into practice. Heaven et al (2006) in their random controlled study on teaching communication skills showed that specialist nurses in the UK (n=61) who received follow up supervision were able to transfer skills from workshops into the workplace, while those not provided with supervision were not.

Third, the HPs' perception that advice giving and referral are the two key drivers for a successful Keep well consultation does not reflect the competency framework developed for this study, nor a recent NHSGGC competency statement for health care support workers. When undertaking Keep well HPs should understand the principles of motivational interviewing approaches as part of supporting behaviour change.

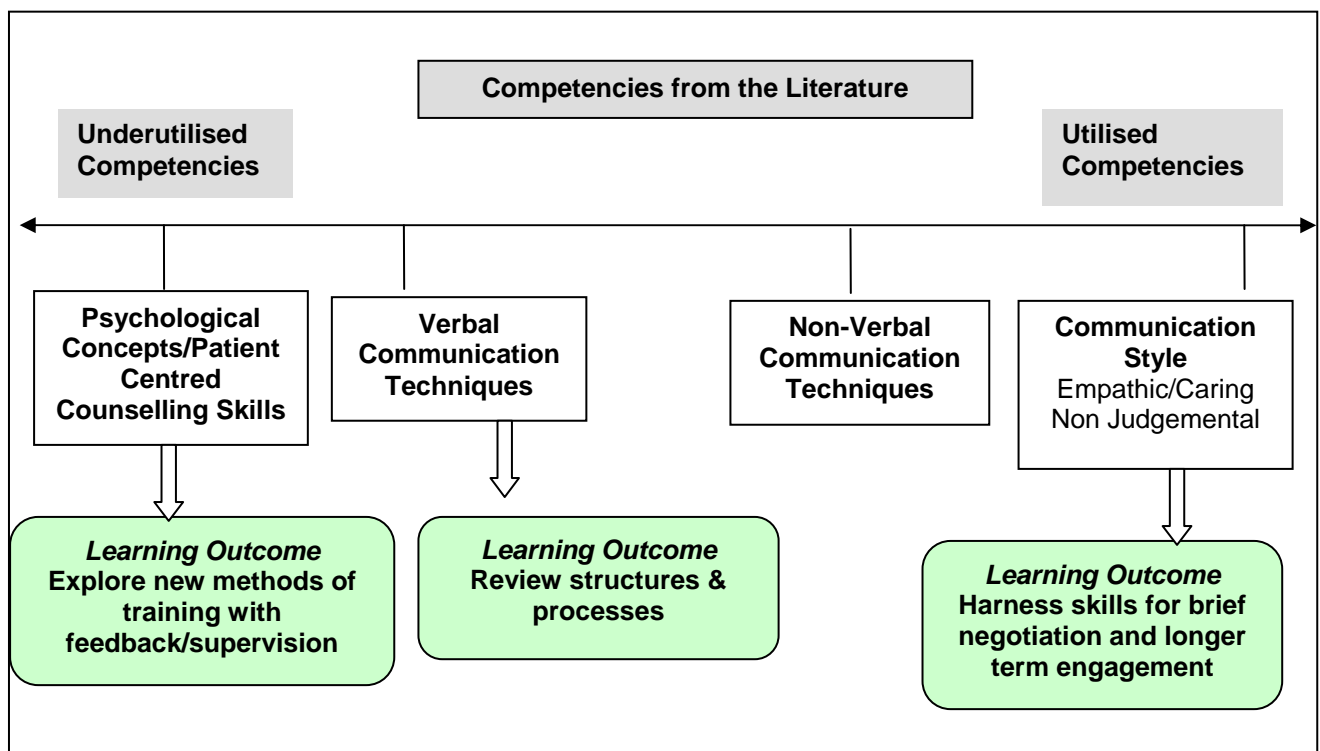
Advice giving and making referrals are perhaps given a high level of importance because it mirrors the current structures and processes around delivering Keep well. An important feature highlighted by the research is the longer appointment time. Although in the longest appointments a fairly rigid structured approach was utilized. This involved completing all sections of the template and providing all information to

all patients regardless of individual needs. Consultations lasting 22-56 minutes were shown to have BECCI scores above one, while very short and longer length of appointments had lower scores than one.

The following learning actions are recommended (see figure 4.1) from the results of the three research phases (the literature review, observation of consultations and views of the HPs and patients):

- Harness the demonstrated good communication style to develop brief negotiation and longer term engagement competencies.
- Explore new training methods for patient centred counselling skills that include elements of feedback/supervision.
- Review Keep well structures and processes, in particular in relation to delivering the consultation.

Figure 4.1: Linking Competency Framework to Study Recommendations



5. References

- Bland JM, Altman DG (1996) Statistics Notes: Measurement error and correlation coefficients. *British Medical Journal* 313, 41
- Chapelhow C, Crouch S, Fisher M, Walsh A (2005) *Uncovering Skills for Practice*. Nelson Thornes Ltd, Cheltenham.
- DH (2004) NHS Knowledge and Skills Framework www.dh.gov.uk/en/Publicationsandstatistics
- Egan, G (1986) *The Skilled Helper*. California. Brooks/Cole Publishing.
- Fowler, G, Gray M, Anderson P (eds) (1993) *Prevention in general practice*. Oxford. Oxford University Press.
- DiCicco-Bloom B, Crabtree, B (2006) The qualitative research interview. *Medical Education*. 40, 314-321.
- Heath C, Luff P, Svensson MS (2007) Video and qualitative research: analysing medical practice and interaction. *Medical Education* 41;1,109-116.
- Heaven C, Clegg J, Maguire P (2006) Transfer of communication skills training from workshop to workplace: The impact of clinical supervision. *Patient Education and Counselling* 60, 312-325.
- Jaarsma T, Stromberg A (2009) Cardiovascular Nursing: More than being nice. *European Journal of cardiovascular Nursing* 8, 315.
- Lane C, Huws-Thomas M, Hood K, Rollnick S, Edwards K, Robling M (2005) Measuring adaptations of motivational interviewing: The development and validation of the Behaviour Change Counselling Index (BECCI). *Patient Education and Counselling* 56;2, 166-73.
- Mercer S, Maxwell M, Heaney D, Watt G (2004) The consultation and relational empathy (CARE) measure: development and preliminary validation and reliability of an empathy-based consultation process measure. *Family Practice* 21; 6, 701-707.
- Miller WR, Rollnick, S (1991) *Motivational Interviewing: Preparing people for change*. New York. Gilford Press
- NHS Health Scotland. *Health Scotland.com. Overview of Keep Well.* <http://www.healthscotland.com/anticipatory-care-keepwell.aspx#delivering> [accessed 15th February, 2010]
- Noonan WC, Moyers TB (1997) Motivational Interviewing a review. *Journal of Substance Misuse* 2, 8-16.
- Paul, S Sneed NV (2004) Strategies for behaviour change in patients with heart failure. *American Journal of Critical Care* 13, 305-313.
- Themessl-Huber M, Humphris G, Dowell J, MacGillivray S, Rushmore R, Williams B (2008). Audio-visual recoding of patient-GP consultations for research purposes: A literature review on recruiting rates and strategies. *Patient Education and Counselling*. 71. 157-168.
- The Scottish Government (2008) *Better Coronary Heart Disease and Stroke Care: A Consultation Document*. Edinburgh.
- WHO (2005) *Preparing a healthcare workforce for the 21st Century, the challenge of chronic conditions Noncommunicable Diseases and Mental Health Cluster Chronic Diseases and Health Promotion Department.* http://www.who.int/chp/knowledge/publications/workforce_report.pdf [accessed 15/11/2010]

Appendix I Information Sheets



Department of Nursing & Health Care
57 - 61 Oakfield Avenue
University of Glasgow
Glasgow
G12 8LL
0141 330 3526

A Research Project to Explore How Health Professionals Conduct Keep Well Planned Consultations

Information Sheet

We would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you would like more information.

Who is conducting the research?

The research is being carried out by a research team from the University of Glasgow, Department of Nursing and Health Care and NHS Greater Glasgow and Clyde.

What is the purpose of the study?

The Scottish Government introduced the Keep Well initiative in 2006. Keep Well involves free health checks for people between 45 and 64 years to identify any health risks and to offer help and support to reduce risk of future ill health.

The University of Glasgow has been asked to identify and review what happens in these Keep Well consultations. Your GP practice has agreed to take part in this study. We are inviting people like you who are attending appointments to take part. So that we can do this it is necessary to record by camcorder, what is said and done during the Keep Well appointment. The results of the study could be used to inform further research and training to improve the consultation process.

Why have I been invited?

You have been asked to take part in this study as you have been invited and agreed to attend a Keep Well appointment at your GP surgery.

Do I have to take part?

It is up to you to decide. We will describe the study and go through this information sheet, which we will then give to you. You will be asked to sign a consent form to show you have

agreed to take part. You are free to withdraw at any time, without giving reason. This would not affect the standard of care you receive or your future treatment.

What does taking part involve?

- On one occasion your Keep Well consultation with your healthcare professional would be recorded by an unmanned camcorder.
- A short (10-15 minutes) audio taped conversation with the researcher after your consultation to see how you felt it went.
- Allowing the research team to have access to your health information which was discussed and recorded during the consultation.
- The total time involved will be around 1 hour, including 10-15 minutes before your appointment and 10-15 minutes afterwards.

What happens to the information?

Your identity and personal information will be completely confidential and known only to the researcher. The information obtained will remain confidential and stored within a locked filing cabinet. The data are held in accordance with the Data Protection Act, which means that we keep it safely and cannot reveal it to other people, without your permission.

What are the possible benefits of taking part?

It is hoped that by taking part in this research, you will be providing valuable information about how health care professionals communicate with patients during Keep Well consultations. We would hope to develop our findings to help further training and education of health care professionals.

Who has reviewed the study?

This study has been reviewed by the NHS Glasgow and Clyde Local Research Ethics Committee.

If you have any further questions?

We will give you a copy of the information sheet and signed consent form to keep. If you would like more information about the study and wish to speak to someone, please contact:

If you have a complaint about any aspect of the study?

If you are unhappy about any aspect of the study and wish to make a complaint, please contact the researcher in the first instance but the normal NHS complaint mechanisms is also available to you.

Researcher's Details

Thank-you for your time and co-operation



Researcher's address

Exploring Health Professional Competencies in Keep Well Planned Consultations Health Care Practitioner Information Sheet

We would like to invite you to take part in a research study. Before you decide you will want to know why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you would like more information.

Who is conducting the research?

The research is being carried out by researchers from the Nursing & Health Care, University of Glasgow, supported and funded by NHS Greater Glasgow and Clyde.

What is the purpose of the study?

The Scottish Government introduced the Keep Well initiative in 2006. We have been asked to identify and review what happens in these Keep Well consultations in North and East Glasgow CHCPs. The way a health care practitioner communicates with a patient can have an effect on a person's attitude to change. We hope to assess these communication skills through the use of recorded consultations. We are interested in the verbal and non-verbal skills that health care practitioners use when conducting a Keep Well consultation. So that we can do this it is necessary to record, by camcorder, what is said and done during the Keep Well appointment. We are looking at the communication process between patient and health care practitioner. We will not be assessing any clinical measures that you undertake during the consultation.

Why have I been invited?

You have been asked to take part in this study as you are the healthcare practitioner who carries out Keep Well consultations in your General Practice. Your practice has agreed to allow us to contact you regarding the study.

Do I have to take part?

It is up to you to decide. We will describe the study and go through this information sheet. You will be asked to sign a consent form to show you have agreed to take part. You are free to withdraw at any time, without giving a reason.

What does taking part involve?

- Issuing a standard letter and information sheet provided by the researcher to 3 or 4 patients who have made a Keep Well appointment. We will then talk to the patient and obtain their consent prior to their appointment with you with you.
- Having 3 or 4 Keep Well consultations recorded by an unmanned camcorder which we will set up prior to the patient's arrival.
- Having a short conversation with the researcher after each consultation or after a number of consecutive consultations to see how you felt about each consultation. We will also talk to each patient after their consultation. The conversation will be audio taped using a tape recorder.
- Identifying and issuing letters will take approximately 10 minutes per patient. The nurse's interview time will be approximately 15 minutes per patient in addition to the Keep Well consultation. The total additional time for you is approximately 30 minutes per patient.

What happens to the information?

Your identity will be kept completely confidential and known only to the researchers. The information obtained will remain confidential and stored within a locked filing cabinet. The data will be held in accordance with the Data Protection Act, which means that we will keep it safely and cannot reveal it to other people, without your permission. Personal data will not be kept for any longer than 12 months after the end of the study.

Insights gathered by you and other participants will be used in writing the results of this research study. Though direct quotes from you may be used in the report, your name and other identifying information will be kept anonymous.

What are the possible benefits of taking part?

It is hoped that by taking part in this research, you will be providing valuable information about how health care practitioners communicate with patients during Keep Well consultations. We plan to develop the findings to help further education of health care practitioners. We also intend to offer a feedback session to all healthcare practitioners involved in the study.

Who has reviewed the study?

This study has been reviewed by the NHS Glasgow and Clyde Research Ethics Committee.

If you have any further questions?

We will give you a copy of the information sheet and signed consent form to keep. If you would like more information about the study and wish to speak to someone, please contact:

Researcher's Details

If you have a complaint about any aspect of the study?

If you are unhappy about any aspect of the study and wish to make a complaint, please contact the researcher in the first instance but the normal NHS complaint mechanism is also available to you.

Thank-you for your time and co-operation

Appendix II

Study Measures

A Research Project to Explore How Health Practitioners Conduct Keep well Planned Consultations

Health Practitioner Interview

- 1) During the appointment time with ... (patient) can you describe what happened?
- 2) How did this compare to what you think should happen in a Keep well?
- 3) When you were in with ... (patient) how at ease did you feel?
 - a) If you felt at ease, what do you think helped you feel this way?
Was there anything that might have helped to make you feel more at ease?
Or
 - b) If you did not feel at ease, is there anything that could have done to help you feel more at ease?
Is there anything else that might have helped to make you feel more at ease?
- 4) How important is it to listen to the patient during the Keep well consultation?
During the time with ... (patient) did you feel you were able to listen to the patient?
If yes, what do you think were the patient's concerns?
If no, why do you think this is?
- 5) Can you describe how you important seeing the whole person in the consultation is in Keep well?
If important, how did you feel you were able to do this?
If not important, why do you think this is?
- 6) Do you think the patient had any worries?
Can you tell me more about theses worries?
Do you feel you were able to show that you understood their worries?
- 7) How well do you feel the patient understood what you were telling them?
If well, why do you think this was?
If no, why do you think this was?
- 8) During the appointment did the patient indicate that they wanted to make changes to help improve their health?
If yes, what do you think helped them think about making changes?
If no, was there anything about the appointment that you feel you could have done differently?
- 10) Is there anything else about the appointment that you would like to tell me about?

Patient Interview

- 1) Can you tell me a bit about what you thought the Keep well appointment today would be about?
- 2) During the appointment time with ... (health practitioner) can you describe what happened?
- 3) How did this compare to what you thought might happen at the appointment?
- 4) When you were in with ... (health practitioner) how at ease did you feel?
 - a) If you felt at ease, do you think the health practitioner helped you feel this way?

Was there anything that might have helped to make you feel more at ease?

Or
 - b) If you did not feel at ease, is there anything (health practitioner) could have done to help you feel more at ease?

Is there anything else that might have helped to make you feel more at ease?
- 5) During the time with ... (health practitioner) did you feel you were really listened too?
 - If yes, can you tell me more about how you were really listened too?
 - If no, can you tell me more about how you knew you were not really listened too?
- 6) Did you feel the health care practitioner was interested in you as a whole person?
 - If yes, how did they show their interest in you?
 - If no, what made you think they were uninterested?
- 7) Did you feel that the health care practitioner really understood what worries you might have?
 - If yes, can you tell me how they showed their understanding?
 - If no, what made you think they didn't understand?
- 8) Can you tell me about how the health care practitioner explained things to you
 - How clear was this to you?
 - If it was clear, how do you think they were able to do this?
 - If no, how could they have explained things better?
- 9) During the appointment did you feel you might want to make any changes to help improve your health?
 - If yes, what do you think helped you think about making changes?

Can you tell me more about that?
 - If no, was there anything about the appointment that could have been done differently?
- 10) Is there anything else about the appointment that you would like to tell me about?

The CARE Measure

Participant number _____

© Stewart W Mercer 2004

1. Please rate the following statements about today's consultation. Please tick one box for each statement and answer every statement.

| | Poor | Fair | Good | Very Good | Excellent | Does Not Apply |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| How was the health care practitioner at ... | | | | | | |
| 1. Making you feel at ease..... <i>(being friendly and warm towards you, treating you with respect; not cold or abrupt)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Letting you tell your "story"..... <i>(giving you time to fully describe your concerns in your own words; not interrupting or diverting you)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Really listening <i>(paying close attention to what you were saying; not looking at the notes or computer as you were talking)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Being interested in you as a whole person ... <i>(asking/knowing relevant details about your life, your situation; not treating you as "just a number")</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Fully understanding your concerns..... <i>(communicating that he/she had accurately understood your concerns; not overlooking or dismissing anything)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Showing care <i>(seeming genuinely concerned, connecting with you on a human level; not being indifferent or "detached")</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Being Positive..... <i>(having a positive approach and a positive attitude; being honest but not negative about your problems)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Explaining things clearly..... <i>(fully answering your questions, explaining clearly, giving you adequate information; not being vague)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Helping you to take control..... <i>(exploring with you what you can do to improve your health yourself; encouraging rather than "lecturing" you)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Making a plan of action with you ... <i>(discussing the options, involving you in decisions as much as you want to be involved; not ignoring your views)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Behaviour Change Counselling Index (BECCI)

- 0. Not at all
- 1. Minimally
- 2. To some extent
- 3. A good deal
- 4. A great extent

The Topic: _____

| Item | Score |
|--|---|
| 1. Practitioner invites the patient to talk about behaviour change Not Applicable <input type="checkbox"/> | not at all a great extent 0 1 2 3 4 |
| 2. Practitioner demonstrates sensitivity to talking about other issues | not at all a great extent 0 1 2 3 4 |
| 3. Practitioner encourages patient to talk about current behaviour or status quo | not at all a great extent 0 1 2 3 4 |
| 4. Practitioner encourages patient to talk about change | not at all a great extent 0 1 2 3 4 |
| 5. Practitioner asks questions to elicit how patient thinks and feels about the topic | not at all a great extent 0 1 2 3 4 |
| 6. Practitioner uses empathic listening statements when the patient talks about the topic | not at all a great extent 0 1 2 3 4 |
| 7. Practitioner uses summaries to bring together what the patient says about the topic | not at all a great extent 0 1 2 3 4 |
| 8. Practitioner acknowledges challenges about behaviour change that the patient faces | not at all a great extent 0 1 2 3 4 |
| 9. When practitioner provides information, it is sensitive to patient concerns and understanding Not Applicable <input type="checkbox"/> | not at all a great extent 0 1 2 3 4 |
| 10. Practitioner actively conveys respect for patient choice about behaviour change | not at all a great extent 0 1 2 3 4 |
| 11. Practitioner and patient <i>exchange</i> ideas about <i>how</i> the patient could change current behaviour <i>(if applicable)</i> Not Applicable <input type="checkbox"/> | not at all a great extent 0 1 2 3 4 |

Practitioner BECCI Score: _____

Practitioner speaks for (approximately):-

More than half the time About half the time Less than half the time

Appendix III

Literature Review: Competency Framework



University
of Glasgow | Nursing &
Health Care



Exploring Health Professional Competencies

In Keep Well Planned Consultations (North & East Glasgow)

**A Framework of Key Skills and Competencies for Patient- Centred
Lifestyle Behaviour Change Counselling**

CONTENTS

| | |
|--|-----------|
| Aims of literature review | 2 |
| Background | 3 |
| Cardiovascular disease - health inequalities in Scotland..... | 3 |
| Assessing cardiovascular disease risk factors..... | 4 |
| Communication skills | 5 |
| Evidence for key communication skills..... | 5 |
| Barriers to communication..... | 9 |
| Training in communication skills..... | 10 |
| Models of health behaviour change | 11 |
| Social cognition models..... | 11 |
| Communication of risk..... | 15 |
| Stage models..... | 17 |
| Recommendations for intervention design | 20 |
| Patient-centred styles of counselling for behaviour change | 21 |
| Patient-centred care..... | 21 |
| Cognitive Behaviour Therapy..... | 23 |
| Motivational Interviewing..... | 24 |
| Brief Intervention..... | 27 |
| Training in patient-centred behaviour change counselling..... | 30 |
| Tools for assessing skills in patient-centred behaviour change counselling..... | 32 |
| Health Professional – Patient interaction during behaviour change Counselling | 34 |
| The influence of information technology..... | 34 |
| Social and environmental influences..... | 36 |
| The influence of individual differences between health professionals..... | 38 |
| Summary of skills/competencies | 40 |
| Conclusion and implications for research study | 45 |
| Summary of finding from literature review..... | 45 |
| Implications for study design and analysis..... | 47 |
| References | 49 |
| Appendices | 57 |
| Appendix 1 – Search strategy for literature review..... | 57 |
| Appendix 2 – NHS Knowledge and Skills Framework (KSF)..... | 58 |
| Appendix 3 – Taxonomy of terms..... | 60 |
| Appendix 4 – BECCI checklist items..... | 61 |

AIMS OF LITERATURE REVIEW

This literature review was conducted as part of the research project 'Exploring Health Professional Competencies in Keep Well Planned Consultations (North and East Glasgow)'. To answer the first research question of the project, this literature review was conducted to aid the development of a core consultation competency framework required of health professionals to deliver the objectives of Keep Well, which represents one of the focussed process evaluation aims of the Keep Well programme. To achieve this, the aims were to:

- Introduce the background to cardiovascular disease (CVD) and health inequalities in Scotland.
- Consider evidence for effective communication skills in health care settings.
- Summarise the psychological theories and models of behaviour change and their evidence base.
- Introduce patient-centred approaches to counselling for behaviour change; focussing on Motivational Interviewing, a style of interaction aimed at helping people increase their motivation and readiness for change.
- Consider the health professional – patient interaction, in terms of potentially influential environmental, social and individual factors.
- Produce a summary of the competencies and skills, drawn from the evidence and required by health professionals to deliver effective health behaviour change consultation.
- Consider the implications of the evidence discussed for the design and interpretation of the present study.

In order to identify studies to be included in the literature review, a comprehensive search strategy was used in conjunction with The University of Glasgow library. The main relevant databases were searched for English language papers from the year 2000 onwards (See appendix 1 for full search terms and databases used). In addition to this, the reference list of retrieved papers was hand searched for relevant papers, and internet searches were carried out. Relevant grey literature and seminal papers were also identified.

BACKGROUND

Cardiovascular Disease - Health Inequalities in Scotland

Cardiovascular disease (CVD) is the leading cause of death in the western world. People living in deprived areas of Scotland are more likely to die from coronary heart disease than those living in more affluent areas, with the poorest having a five fold risk increase compared to the most affluent [1]. Better Coronary Heart Disease and Stroke Care sets out some concerning statistics: that an estimated 14.9% of men and 14.5% of women in Scotland currently live with a cardiovascular disorder; and that the standardised mortality rate within the most deprived tenth of the population is almost five times higher than it is for the least deprived tenth [1]. These statistics demonstrate the gravity of health inequalities in Scotland. NICE guideline, Behaviour Change at Population, Community and Individual levels [2] describes health inequalities as 'the result of a set of complex interactions including: the long-term effects of a disadvantaged social position; differences in access to information, services and resources; differences in exposure to risk; lack of control over one's own life circumstances; and a health system that may reinforce social and economic inequalities' [2 p.7].

Health policy in Scotland since the late 1990's has increasingly focussed on health inequalities and the importance of lifestyle, with a shift towards prevention and anticipatory health care. In response to the Kerr report in 2005, the government set out a policy of change for the NHS: 'Delivering for Health' [3]. A key national priority identified within this policy was to strengthen and enhance primary care services in deprived areas to reduce health inequalities. In support of this goal, the Scottish government launched Keep Well in 2006 (formally known as 'Prevention 2010'), with the aim of piloting anticipatory care in the most disadvantaged areas of Scotland. The focus of Keep Well is on identification of risk factors for CVD; treatment and referral. It represents £25 million of investment between 2006 and 2009, largely for additional staff to identify those most at risk and offer health check, screening and advice [4].

Many of the risk factors related to cardiovascular disease are lifestyle choices that can be altered such as: smoking cessation, improved diet, increased activity and reduced alcohol consumption [5]. It is acknowledged that making lifestyle changes to behaviours is as important as medicinal treatment for secondary prevention of CVD [6]. However evidence suggests that adults in the UK have a poor awareness of lifestyle risk factors for heart disease [7]. The Scottish Government hopes to help

people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local and faster access to healthcare specifically to narrow the gap in mortality from coronary heart disease [1].

Assessing Cardiovascular Disease Risk Factors

The policy document Better Coronary Heart Disease and Stroke Care [1 p.6] places NHS workers in the role of 'creating the conditions in which people have the confidence, motivation and ability to make healthy choices and providing professional services and support'. Under Keep Well, individuals between the ages of 45 and 64 years who are registered with a General Practice are invited to a Keep Well health check consultation. The structure of the Keep Well consultation within NHS Glasgow & Clyde is defined by a standardised computer based template. The core elements involved are; detailed CVD screening; data recording; practice based lifestyle counselling; referral to relevant services; follow up of referral; and the systematic documentation of outcomes [8]. Wave I of the pilot scheme involved practices within the five most deprived Community Health Partnerships (CHP), with another seven CHPs being added in wave II.

The Keep Well consultation offers a health check up and lifestyle advice to all those who accept the invitation to attend. In addition to lifestyle advice, individuals who present with a high risk of CVD are offered pharmacological intervention. Various scoring systems have been developed as tools to assist in the assessment of individual risk. The Framingham [9] based scoring system, developed from a longitudinal study of an American population, has been widely used to allocate a cardiovascular disease risk score based on risk factors. However in a Scottish population, a Framingham based risk score was found to under represent CVD risk in a population with high deprivation [10]. To incorporate the CVD risk related to social deprivation a new measure of CVD risk was created for the Scottish population termed ASSIGN [11]. This incorporates the same risk factors as the Framingham score but in addition includes family history of CVD, the SIMD (Scottish Index of Multiple Deprivation) score and number of cigarettes smoked / day. The tool provides a 10 year estimate of CVD risk in people who have no current history of CVD. A score of 20 or more is considered high risk and according to guidelines should be considered for pharmacological intervention.

The impact of CVD on the health of the Scottish population, particularly those living in high deprivation, has now been established. The rest of this review will focus on how

best to intervene to reduce lifestyle behaviours which represent increased risk of CVD, beginning by looking at the evidence for good communication skills within health care settings.

COMMUNICATION SKILLS

Evidence for key communication skills

The importance of good quality interactions between health professionals and patients is widely accepted as key to effective health care delivery [12]. Research findings show that successfully changing any behaviour is dependent on effective communication from health care professionals [13]. Good communication techniques can encourage a patient to engage, participate and make a personal investment in changing their health behaviours [14].

Stewart suggests that communication difficulties often arise in relation to: diagnostic issues; failure to adequately involve the patient in discussion; and insufficient information being supplied to the patient [15]. Other research has indicated that patients are often not given the opportunity to fully express themselves during consultations. One study, for example, found that patients were interrupted, or 'redirected' after an average of only 23.2 seconds of their opening presenting statement [16]. In addition, in an analysis of communication between GPs and patients carried out in the UK, it was found that only a small percentage of patients views or concerns were elicited by the GPs in relation to prescribing a medicine, the consultations being dominated by information and instruction giving [17]. An NHS Scotland report – Talking Matters, produced in 2003 – included patient views collected from hospitals in NHS Lothian on communication issues. This highlighted a number of failures in communication as perceived by patients, such as: lack of involvement in decision making; lack of appropriate information and explanation provision; lack of opportunity to speak with a doctor; and inconsistent communications from different staff [18].

Poor communication by health professionals can lead to poor patient satisfaction. A report by Coulter [19] stated that poor communication and failure to recognise the patient's perspective are at the source of the majority of formal complaints and legal actions in the NHS. Evidence from national statistics on patient complaints in Scotland supports this. Data from 2008/09 showed that a large proportion (37%) of

all complaints made by patients related to staff issues, specifically to attitudes and behaviour of staff (17%) and written and oral communication issues (16%) [20].

Thus communication, an important issue within healthcare, has been the focus of much research. Within the health psychology field, measurement of the success of doctor-patient interactions has mainly been related to adherence, patient recall and patient satisfaction [21]. However there is also evidence that good quality doctor – patient interactions can have a positive impact on health outcomes. A review of 21 studies of physician-patient communication, which measured patient health as an outcome variable, found good doctor-patient interactions to positively influence outcomes such as emotional health, symptom resolution, functional and physiological status and pain control [15]. Elements identified from this study to achieve effective communication included: asking questions to understand the perceptions and feelings of patients; displaying support and empathy; allowing the patient to express their feelings and opinions fully; encouraging the patient to ask questions; giving clear information; sharing decision making; and negotiating agreement on the problem and planned follow up. A systematic review, conducted by Di Blasi and colleagues [22], on the effectiveness of caring styles on health outcomes, described a ‘positive consultation’ to involve both cognitive care (aiming to influence patients expectations), and emotional care (using a warm, empathic style of interaction). Positive consultations (using both styles) were most effective in influencing outcomes such as pain and speed of recovery.

Researchers have also studied communication skills which health professionals should be using when attempting to facilitate and encourage behaviour change. Using simple, jargon free language; active listening skills; paraphrasing; reflecting; and summarising have been cited as examples of such skills [14]. The type of opening question used to elicit the patient’s presenting problem was also identified as important. Research by Robinson & Heritage [23] showed that general and open questions were related to patients (n=142) having more positive evaluations of the health care professional in terms of listening behaviours and affective-relational communication, than when a closed question was used. Other strategies suggested to promote effective communication are: use of social conversation; use of patient centred interviewing; and discussion of outcome expectations [24]. Further skills, identified from a clinical review of key communication skills and their acquisition, include: asking questions about the impact of illness or problem on patient and family; giving information (by asking patient what information they would like,

prioritising information given); and discussing treatment options (assessing how much involvement in decision making patient desires, understanding patient perspective) [25].

Aptitude in verbal communication and an awareness of non-verbal communication were suggested as essential skills in setting up a trusting relationship between a patient and their health professional. Burke and Fair [14] suggested that to foster a positive patient-professional relationship a health care professional should demonstrate the following qualities: Empathetic understanding; genuineness; unconditional positive regard; intimacy and reciprocity; respect; and mutual trust. One study, looking at performance variables in primary care and their association with patient outcomes, demonstrated that trust was the variable most strongly associated with patient satisfaction [26]. Another reported that in the context of primary care consultations, interactions between patients and physicians which contained trust-building and supportive behaviours led to patients taking a more active role in their health [27]. Thom studied actual behaviours displayed by physicians and found those to be significantly associated with establishing patient trust as: being comforting and caring; demonstrating competence; and good communication (encouraging and answering questions and explaining) [28]. Further evidence of the skills needed to build trust came from a recent qualitative study exploring the views of district nurses counselling hypertension patients. Pedagogical and communicative competence when interacting with patients was emphasised as central to building trust. Not giving the patient too much information at once; delivering information and involving patients in discussion about behaviour change at a level appropriate to their mental capacity; and placing the discussion within the context of the patients lifestyle, were noted as key features of communication in achieving trust [29].

A large body of research on good communication skills for health professionals has focussed on the importance of empathy. Silvester and colleagues [30] suggested that physicians use either an open style (allowing patients more control over the topics of discussion) or a controlling style (focussing on technical not personal information and using more closed questions) of communication when interacting with patients. They found that patients rated their physician as more empathic if they used an open rather than a controlling style of communication. The study involved simulated consultations with medical students as part of the selection process for acceptance to

training as a General Practitioner. Behaviours demonstrated here may not be representative of the style of communication of health professionals in the 'real world'. However the study highlighted the influence of good communicative behaviours by health professionals on the extent to which they are perceived as empathic. Examples were: asking more open questions than closed; discussing personal information as well as technical; picking up on patient cues; positivity; summary statements; not interrupting; and making action statements.

A smaller but equally as important area of research has looked at the impact of non-verbal communication on doctor-patient interactions. Kreps [31] suggested that non verbal cues are crucial in setting the emotional tone of the consultation. Touch has been identified as an important non-verbal skill which can convey empathy by demonstrating an understanding and supportive attitude [32]. However, a review of the literature by Ong and colleagues [33], suggested that this may be culturally dependent. They reported contrasting results on patient satisfaction associated with touch during interactions from different study populations. Facial expressivity and smiling, eye contact, head nodding, hand gestures, posture and body leaning, have also been described as conveyers of affective and emotional information [34]. How a health professional orientates and positions themselves can be an indicator of whether or not they are actively listening. Egan [35] proposed the SOLER technique to represent micro-skills which he considers essential for good non-verbal communication: Sit squarely in relation to the patient; have an Open posture; Lean forward at times during the consultation; maintain a natural level of Eye contact; and Relax – this will put the patient at ease.

Barriers to communication

If barriers prevent good communication within a consultation a patient may feel embarrassed, intimidated or incompetent and may not disclose information which is essential for effective treatment [14]. Both personal and organisational barriers were identified from a review of the literature by the British Medical Association [36], as having the potential to hinder effective communication by health professionals. Personal barriers on the part of health professionals include: failure to use and understand the importance of key communication skills; negative attitudes and low priority given to communication skills; lack of inclination to communicate with patients due to time constraints; not wanting to discuss difficult topics; low confidence or concerns over confidentiality; tiredness and stress; and language competence. It also cited organisational barriers relating to the conditions in which health professionals are communicating with patients, such as time constraints, work pressures and interruptions.

In addition, Beckman-Murray & Zetner [37], summarised a number of styles of communication identified from previous literature as hindering the progress of a consultation: using medical jargon; expressing a strong opinion; or using statements which are generalised and don't take the individual into consideration (i.e. I'm sure everything will be fine). Maguire and Pitceathly [25] identified a number of blocking behaviours exhibited by health professionals towards patients which can hinder effective communication. These include offering advice too early; brushing off distress as 'normal'; discussing physical issues only; changing the subject; or 'jolly' the patient along.

Another potential barrier to using effective communication skills may be a lack of training. In a qualitative study examining how GP's give advice about stopping smoking, the doctors expressed a preference for a non-confrontational style of advice giving, however half of the sample found that they were more confrontational with patients' who did not change their smoking behaviour despite chronic illness. GPs felt that they had limited skills to deal with patients' who were unmotivated to change their behaviour, but they were open to learning new skills to approach these patients [38]. This study demonstrates that health practitioners may be aware that their communication style is not conducive to helping patients change their health behaviours, and may sometimes lack the skills and knowledge to implement a more successful communication style.

Training in communication skills

A number of communication skills training programmes for health professionals have been established in the UK, particularly within the cancer field (e.g. Maguire, Fallowfield). However, Chant [39] identified a number of problems with training, such as: lack of provisions and inconsistencies between programmes; a bias towards teaching lists of skills, rather than relational development with the patient; and the gap between what is taught and what is practiced. In addition, he highlighted a number of social barriers to applying communication skills training in practice, such as: workplace policies culture (e.g. task oriented roles); biomedical dominance; environmental aspects of surroundings (such as noise and interruptions); the hierarchy of health care (nurses being seen as having little power within the hierarchy); and stress and lack of support for nurses. This evidence suggests that successfully improving communication skills in health care requires training to be embedded in more general changes in organisational and environmental contexts.

Communication skills now form a core competency in training for healthcare staff, through the NHS Knowledge and Skills Framework (KSF) [40]. NHS KSF describes the knowledge and skills which NHS staff need to apply in their work in order to deliver quality services. Communication is the first of the six core NHS KSF dimensions and there is a specific dimension (HWB1 Promotion of health and wellbeing in the prevention of adverse effects to health and wellbeing – see appendix 2 for full description), which relates to good communication in anticipatory care. Key communication skills required within this dimension are: Listening skills; non-verbal skills and body language; and questioning skills. Similar frameworks listing communication competencies can be found for general nursing [41] and coronary heart disease [42].

A workforce competency framework for vascular risk assessment by Skills for Health within the NHS in England [43] included the importance of lifestyle advice within a health check for CVD risk factors, similar to Keep Well Scotland. In addition, it took a patient centred approach, including consideration of health within the social and environmental context of the individual and assessing individual understanding of risk. However, the competencies listed mainly relate to clinical activities; communication skills are only mentioned in relation to two generic knowledge skills for communication and interpersonal relationships: i) how to ask questions, listen carefully and summarise back, and ii) how to present information and advice in ways appropriate for different people. This would not appear to sufficiently reflect the comprehensive evidence for effective communication detailed here, indicating the

need for more detailed competencies in terms of communication to be developed from the existing literature to inform good practice.

MODELS OF HEALTH BEHAVIOUR CHANGE

Social Cognition Models

It is widely acknowledged that through adopting health enhancing behaviours (such as healthy eating and being more active) and reducing health-compromising behaviours (such as excessive alcohol consumption or smoking); individuals can have a significant impact on improving their own health [44]. Researchers in the field of psychology studied social and cognitive factors influencing these health behaviours, and developed numerous models in an attempt to predict and intervene to influence behaviour change. For the purposes of this review, social cognition models will be discussed specifically in the context of their relevance to changing risky lifestyle behaviours, although it is important to note that they have been applied to numerous sub-groups of health behaviours, such as adherence to medication [45] and screening uptake [46]. Although the models made a huge contribution to understanding in this area, behaviour change is a complex phenomenon, and no single model seems to fully predict or explain it [47]. A significant limitation in applying the models to inform interventions is their overlapping concepts, leading to the suggestion that a single 'core' model be developed to encompass all of the key concepts influencing health behaviour change [48]. Therefore, the main concepts from the key models will be discussed and evidence for their practical application considered, rather than considering each model in depth.

An early social cognition model - the Health Belief Model (HBM) [49], described four main beliefs said to be important when individuals are faced with changing health behaviour. These are: perceptions about *susceptibility* to and *severity* of illness; and the *costs* and *benefits* of carrying out the health protecting behaviour. The model also described *cues to action* such as a life event or health campaign as potential triggers to change [50]. The development of the HBM allowed measurement of specific cognitions and targeted intervention at helping people change health behaviours [48]. It also provided a common model of cognitive process for researchers to refer to [51]. However, it attracted a number of criticisms, primarily the assumption of the process of decision making as a rational one, not taking into consideration the habitual nature of many health behaviours or the role of emotional and social factors in the process

[51]. It has also been suggested that it does not attach enough significance to the importance of the role of others, such as family and friends [47]. Furthermore, Thirlaway & Upton suggested that the model is limited by its application to behaviours assumed to be carried out purely for health reasons, as in reality lifestyle behaviours such as excessive drinking or smoking often have other functions unrelated to health [52]. In a meta-analytic review of studies using the HBM to predict health behaviour [53], Harrison, Mullen & Green found that less than 10% of variance in health behaviours could be explained by any one dimension of the model. This evidence points to the conclusion that there are likely to be additional variables, not considered by the HBM, which influence health behaviour.

The concept of subjective norms was introduced by the Theory of Reasoned Action (TRA) [54] and suggests that in addition to individuals' beliefs about a given health behaviour, the beliefs of people important to them (normative beliefs) and a motivation to gain approval from these individuals are also important. The addition of social influence was an important development to have come from the TRA, as was recognition of the importance of *intentions* in mediating the relationship between cognitions and behaviours [51]. The concept of self-efficacy, or perceived behavioural control (the degree to which an individual believes they can successfully carry out the behaviour) was incorporated into the TRA, and the model became known as The Theory of Planned Behaviour (TPB) [55]. A meta-analytic review of studies using the TPB found the components of the model to account for 39% of variance in intention and 27% of variance in actual behaviour. When the behavioural outcomes were measured by self-report (rather than by objective or observation methods); the model only explained 11% of variance in behaviour [56]. This evidence suggests that the model is not strong in predicting intention or actual behaviours; there are likely to be other influencing factors, not captured by the TPB. A meta-analytic review of studies using the TRA and TPB in relation to physical activity, for example, found that inclusion of past behaviour into the model increased the amount of explained variance in intentions to 60% and behaviour to 47% [57]. This evidence suggests that alongside the variables contained within the original TRA and TPB models, whether or not an individual has previously carried out a given health behaviour is likely to be an important predictor or whether they will do so again.

Perceived behavioural control has been found to account for a large percent of variance in intention and behaviour, over and above the existing TRA variables [56]. This suggests that behavioural intention will not progress to action if the person does

not believe they are able to carry the behaviour out. This concept of self-efficacy is linked to the theory of Locus of Control (LOC) [58], which describes individuals as having an internal or an external locus of control. Those with an internal locus of control believe they are in control of what happens to them, whereas those with an external locus of control consider what happens to them to be out with their control. Within the health field Wallston and colleagues [59] developed this further using the multidimensional health locus of control scale (MHLC). This considers the extent to which people perceive their health to be under their own control (internal HLC), the control of others, or chance. It is predicted from this that people with internal HLC would be more likely to engage in health promoting behaviours as they believe they can make a difference to their own health [44]. A study by Norman and colleagues [60] reported results from a national survey of 11,632 people in Wales, looking at HLC, health value and performing health behaviours (alcohol consumption within recommended limits, not smoking, regular exercise and consuming fruit six or seven days a week). They found that people with an internal HLC performed significantly more health behaviours than those with an external HLC ($p < .001$). They also found that the importance or value an individual attached to their own health moderated this somewhat, but this finding was only significant for those with external HLC. Despite these positive findings, the overall amount of variance explained by HLC was small, at only 3%, so it could be argued that alone, perceived control is a weak predictor of health behaviour. However, in conjunction with the other variables discussed, perceived control may have an influence of the likelihood of an individual conducting a health promoting behaviour.

Self identity was also identified as a concept which may be important in predicting health behaviour. Individuals are said to be more likely to carry out a given health behaviour if it fits with their self image [61]. For example, someone who perceives themselves as a generally fit person will be more likely to exercise. Higgins' [62] self-discrepancy theory describes differences individuals perceive between their 'ideal self' and their 'actual self' and proposes that an individual's motivation to perform any given behaviour will be influenced by the extent to which it fits in with their 'ought to be' or 'ideal self'. This suggests that individual beliefs relating to identity may need to be targeted in encouraging individuals to change their behaviour, however little research has focussed on this specifically.

A large number of studies failed to predict a substantial percentage of variance in actual behaviour using the variables contained within the HBM and TPB [e.g. 56; 53].

The models appear to have some degree of success at explaining intentions to perform health behaviours, but less so in predicting actual behaviours, leading to questions over their validity [56]. An important contribution to understanding how individuals translate behavioural intentions into actual behaviour came from Gollwitzer's concept of implementation intentions [63]. He described the importance of forming specific plans of when and how a given behaviour will be carried out within the individual's own circumstances. So, for example, a person who intends to become more active is more likely to do so if they have a plan of beginning their increased activity by going for a walk at 11am the following day, than someone who simply has an intention to become more active. A recent meta-analysis of studies considering the effect of implementation intentions found a medium to large positive effect on goal achievement, thus supporting this concept's importance in turning intentions into behaviours [64]. This is important as the ultimate aim of health promotion interventions is to encourage individuals not only to intend to but to actually make lifestyle behaviour changes to improve their health.

Having discussed the main concepts emerged from the behaviour change models, it is now important to consider the impact of perceptions of risk on changing behaviours.

Communication of risk

Individual perceptions of risk and susceptibility to a particular illness emerged as important factors in determining the likelihood of preventative health behaviours being performed. It could be assumed that the risk assessment process is rational, however work by Weinstein suggests that people frequently underestimate their own risk, in what he termed as 'unrealistic optimism'. He suggested four cognitive factors associated with developing this unrealistic optimism: lack of personal experience with the illness; a belief that the illness is preventable by ones own actions; a belief that the illness has not occurred so far it is unlikely to in the future; and a belief that the illness occurs infrequently. He also describes a tendency towards selective focus: when an individual focuses on their own risk-reducing behaviours while ignoring risk-increasing behaviours [65]. This irrational element to cognitive processing is important in counselling patients on changing health behaviour in terms of assessing beliefs about susceptibility and increasing 'actual risk' awareness.

Protection Motivation Theory (PMT) [66] was developed to explain the impact of fear appeals on attitudes and behaviours. It includes a role for the beliefs outlined in the HBM and expands on this to include individual beliefs about response effectiveness of health promoting behaviours (how successful they perceived the behaviour would be at preventing illness), and self-efficacy (as described in the TPB). The first two constructs were grouped by the theory as 'threat appraisal' and the second two as 'coping appraisal'. These cognitive appraisal processes are said to result in an adaptive coping response (of behavioural intention), or a maladaptive coping response (such as denial or avoidance) to a threat invoking message. Another theory, the Theory of Self-Regulation [67], describes how people think about illness and establish coping strategies, and how this influences their current health related behaviours. The first element described is illness representations, which are cognitions formed from illness beliefs, past experience or information from professionals, peers or media. Illness representations are divided into five main constructs: the label applied and symptoms perceived as defining the illness (identity); causes; duration of symptoms; consequences or outcome; cure and control. It suggests that individuals process this information to create a representation of the threatened illness, then go on to develop a coping strategy through changing health behaviours. A period of evaluation follows coping strategies to determine if they have been effective.

These theories are useful in understanding how individuals react to attempts to change their behaviour. Based on the concepts behind the theory of self-regulation, an effective health message was suggested to contain: fear eliciting information; cognitive information about the causes and consequences of the health threat and likely benefits of action; information about action to deal with the threat; and finally self-efficacy increasing information, to encourage the individual that they are able to deal with the threat [67].

There has been considerable debate over the years about the usefulness of fear in public health campaign messages. A meta-analysis of studies looking at fear appeals, conducted by Witte & Allen [68] concluded that health messages with a strong fear element do increase levels of perceived susceptibility and severity, however it was also recognised that such messages can result in both adaptive responses and maladaptive responses (such as defensive avoidance). The importance of increasing perceived efficacy alongside the risk communication was highlighted in their finding that messages with high fear *and* efficacy content resulted in the most behaviour change, as opposed to high fear messages with a low efficacy

content, which resulted in the highest levels of defensive, maladaptive response. This evidence points to the importance of devising ways of presenting health information, such as information about lifestyle behaviours representing increased risk of CVD, which will be most conducive to behaviour change.

Stage models

The models and their concepts considered thus far have considered cognitive processes and social factors suggested to influence decisions about changing behaviour to prevent ill health. However, critics have suggested that a major shortcoming of these models is that they do not include a temporal element in the decision making process. Taking influence from but addressing criticisms of previous models, Schwarzer posited the Health Action Process model (HAPA), which distinguishes between motivation and action stages of behaviour change [69]. The initial motivation stage is described as being influenced by self - efficacy, outcome expectancies (including social outcomes) and threat appraisal variables (severity and susceptibility elements); it is at this stage that a person would make a decision whether or not they intend to carry out the behaviour (behavioural intention). The action stage is then said to be influenced by cognitive factors (such as making action plans); and situational factors (such as availability of social support and the absence of barriers). This model brings together a number of important variables included in previous models, with a description of how these factors influence different stages in the process of change. It also includes a description of how behavioural intentions are translated into actual behaviour [70]. However, it has been argued that the role of emotional factors is still underplayed, and the role of social and environmental factors out with individual cognitions about them is not sufficiently described [61].

The Transtheoretical Model of behaviour change (TTM, also known as stages of change theory), was developed by Prochaska & Di Clemente in 1983 [71]. It consolidated understanding of the various cognitive and social factors described by previous models with an explanation of the actual process of changing behaviour, recognising that different stages in this process are influenced by different social-cognitive and behavioural factors [72]. It consists of four constructs: stages of change, decisional balance, self-efficacy, and processes of change, drawing on concepts from previous models [52]. Behaviour change is described as a cyclical process, occurring in distinct stages: pre-contemplation; contemplation; preparation; and action [73]. The model also encompasses a maintenance stage during which the

behaviour change is sustained and a relapse stage, when an individual may experience a set back to a previous stage [74].

The model proposes that people move through the stages as the benefits of changing behaviour start to outweigh the costs, the later three constructs described above being said to help people move through the stages. Prochaska and colleagues [75] described ten processes said to facilitate movement along the stages towards change. Five of the processes are associated with cognitions and emotions in relation to the problem behaviour which is to be changed (e.g. smoking): consciousness raising (increasing awareness and understanding); dramatic relief (expressing feelings); environmental re-evaluation (assessing impact on environment); social liberation (developing alternative behaviours); and self-re-evaluation (evaluating how the problem makes an individual feel about themselves). The other five processes which can assist in the move towards change are behavioural in nature: counter-conditioning (substituting the behaviour for alternatives); helping relationships (characterized as trusting, accepting and supporting); reinforcement management (use of positive reinforcement and goal setting); stimulus control (restructuring the environment to control for stimuli/triggers to the behaviour); and self-liberation (belief in one's own ability to change). These cognitive, emotional, social and behavioural processes draw on concepts from existing models of behaviour change previously described. The TTM brings them together along with recognition that different processes can be matched to different stages of change [76]. This has important implications for intervention design as it suggests the need for different processes to be targeted in attempting to change the behaviour of individuals who are at different stages of readiness to change. This led to recognition that 'en masse' interventions, such as mass media or community health projects, may have limited effectiveness, and more individualised, 'tailored' interventions matched to individual stage of change may be required. The TTM is relevant to considering how to change a number of behaviours which are risk factors for CVD, such as inactivity, smoking, and poor diet [77].

Despite its popularity and influence, evidence for TTM based applications for behaviour change has produced mixed results. Van Sluijs and colleagues [77] conducted a systematic review of stages of change based interventions to alter CVD related lifestyle behaviours such as smoking, activity and diet. The review found no evidence for physical activity, limited evidence for smoking and some evidence for a reduction in fat intake. These mixed results appear to undermine the usefulness of the model; however, inconsistencies in results may be due to a number of factors.

The authors of the review question the direct application of the TTM to behaviours which are not dichotomous (such as eating habits), as it was originally described for behaviour change related to smoking cessation (individuals either smoke or they don't smoke). It was questioned whether the model can be successfully applied to behaviours which do not represent the *cessation* of an 'unhealthy behaviour' but the *initiation* of a healthy one (e.g. increased exercise activity). This lack of support for the TTM from some research studies suggest that the model cannot be applied across all health behaviours. For example, much more knowledge may be required of someone to recognise their eating and exercise habits as unhealthy, than required to be aware of the unhealthy smoking habit [78]. In addition, some researchers have questioned the conceptual basis for the division of stages within the model. Sutton [79] for example, highlighting the strong correlations between stages suggests this undermines the validity of the distinction of stages. The distinction between the action and maintenance stages has been described as an arbitrary division of the duration of the behaviour, not qualitatively different stages [80], and further, suggested that readiness to change may be better described as movement along a continuum, rather than a series of separate stages [81]. Finally, although the stage models provide explanations of process and causality between the concepts relating to behaviour change, they still lack in descriptions of emotional, instinctive and habitual influences, and assume the process of decision making to be under volitional control [52]. Despite these issues, it can be suggested that the TTM provides a good conceptual framework for developing interventions to support lifestyle behaviour change in so much as it gives a dynamic view of the concepts identified by various models to influence behaviour change, recognising the need to match the process of intervention at the specific behaviour and readiness to change of the individual. It also represents progress in seeing behaviour change not as a discrete event but as a process, which is more relevant to changing and maintaining healthy lifestyle behaviours [52].

In summary, there is significant overlap in concepts described by the different behaviour change models, as well as a lack of clear definition and measurement, with many identical concepts being referred to using different terms [48]. In addition, many studies designed to assess the effectiveness of the models to behaviour change failed to clearly describe the intervention technique in a way that can be linked specifically to theory or replicated [82]. This has made comparison of the effectiveness of the theories and the constructs within them difficult. Abraham and Michie [83] looked at the application of 26 behaviour change techniques within three systematic reviews of interventions for health behaviour change and found wide

variation in the reported content of interventions. They proposed from this the development of a taxonomy of behaviour change techniques in order to standardise their use and allow scientific testing of their effectiveness. An article by Noar & Zimmerman [84] proposed a variety of ways in which the research on theories of behaviour change could progress, including further testing of existing theories, theory comparison or theory integration. They also highlighted discussion within the literature that different models may in fact be appropriate to describe different behaviours, as well as recognition of problems of applying models to the *initiation* of behaviour change in the same way as the *maintenance* of it.

Recommendations for intervention design

Recognition of the need for more individualised approaches to health promotion has been central in the shift from mass media campaigns and simple information giving, to more patient-centred, tailored intervention. This is in keeping with the aforementioned change in focus of government health campaigns towards an anticipatory care model, where individuals at risk of developing future health problems are targeted with individualised intervention.

The NICE guideline developed to support health care professionals deliver 'behaviour change at population, community and individual levels' [2], suggested that no one model emerges from the evidence base as being superior to another. Training therefore in this area should focus on generic competencies and skills, rather than referring to a specific model. The guideline identified specific variables from the psychological models literature important in planning individual intervention for behaviour change within the social and environmental context of the individual. These were: outcome expectancies (increasing accurate knowledge on the consequences of behaviour); making the intervention personally relevant; promoting a positive attitude; enhancing self-efficacy; descriptive norms (making reference to positive health behaviours within the reference group of the individual); subjective norms (increasing approval for positive health behaviours from important others); personal and moral norms; intention formation and specific plans; behavioural contracts; and relapse prevention.

This concludes discussion of the evidence for models of behaviour change. The next section will focus on how health professionals approach consulting on lifestyle behaviour change in a patient-centred way.

PATIENT-CENTRED STYLES OF COUNSELLING FOR BEHAVIOUR CHANGE

This section will discuss the application of concepts of behaviour change within the context of a patient-centred approach to health care. A number of approaches have been taken in speaking to patients about changing lifestyle behaviours and these will be described and their merit discussed.

Patient – centred care

Current trends in patient care promote a patient-centred, shared decision making model of care, in which the patient has autonomy and a degree of control of their health care and treatment choices. Coulter describes both providing information to and involving the patient as central to patient centred care. Highlighting the need for health professionals to understand patient values and preferences, this recognises them as experts, as “only patients know about their experience of illness and their social circumstances, habits, behaviour, attitudes to risk, values and preferences” [19 p. 649]. In terms of health behaviour change counselling, this approach puts the onus on the patient to be involved in decision making about changing lifestyle behaviours.

Michie and colleagues [85] highlight that the term ‘patient-centred’ has been poorly defined within the literature, and suggest that it contains two main features of eliciting and discussing patient beliefs and activating the patient to take control of the consultation. In their review of studies on the effect of using a patient-centred approach on health outcomes, they report positive associations with patient satisfaction, adherence to treatment and physical health. Their review focussed on patient centred care within the context of chronic illness, however it highlights the potential for the approach to have a positive impact on behaviour change counselling, in allowing patients to develop plans to improve their own health, using their expertise in the context of their circumstances and own risk behaviours.

The shared decision making paradigm has gained interest, particularly in primary care, however evidence suggests that it is not always adopted in practice. A qualitative study involving 20 GPs in Wales found that although the GPs had positive attitudes towards more patient involvement and shared decision making, they did not always utilise such an approach because of perceived patient preference not to be involved and time constraints [86]. For a patient-centred approach to be adopted fully, health care professionals need both skills training and attempts to change general attitudes to health promotion.

Michie suggested that a shift in focus is needed from explaining health behaviours to how to actually change them [87]. NHS skills for health workforce competencies [43] depict specific knowledge and skills needed to advise and 'encourage people to adopt behaviours and activities to reduce their risk of CVD'. However the competency framework does not include descriptions of any specific motivational skills for interacting with patients to achieve this. Within the framework of patient centred care, various patient-centred styles of counselling were applied and evaluated within primary care health behaviour change consultations. The most thoroughly researched approaches to supporting behaviour change to have emerged are cognitive behavioural therapy (CBT) and motivational interviewing (MI).

Cognitive Behavioural Therapy

Cognitive behavioural therapy (CBT) is a well established therapeutic approach within mental health settings and was developed from Beck's cognitive-behavioural theory of emotion [88]. Initially used with individuals experiencing psychological problems, it is now also applied to the field of behaviour change in a health promotion setting. A randomized controlled trial, conducted with 235 participants in America [89], compared a traditional structured exercise program with a lifestyle based physical activity program for increasing physical activity, with secondary outcome measures for CVD risk factors. Both interventions were based around Social Cognitive Theory and the TTM, utilising both cognitive and behavioural strategies, and participants in both groups showed significant improvements in physical activity ($p < .001$ lifestyle, $p = .002$ structured exercise) and cardiovascular fitness ($p = .01$ lifestyle, $p < .001$ structured exercise) from base line to 24 months. In addition, there were significant reductions in systolic blood pressure, diastolic blood pressure and reduced percentage of body fat in both groups at 24 months. The study had hypothesised finding more improvement in the lifestyle intervention than in the structured exercise program; however the significant improvements in both groups may demonstrate the effectiveness of including cognitive and behavioural based elements to intervention. The study also provides evidence that such interventions can affect behaviours which in turn can have a real impact on measureable risk factors for CVD.

Hobbis & Sutton, suggested that the application of CBT techniques within interventions based on the TPB may alter individual beliefs about health behaviours, which according to the TPB would result in behaviour change [90]. This attracted some discussion on the applicability of CBT to health behaviour change. The

feasibility and cost-effectiveness of applying CBT techniques on an individual basis was questioned by the authors themselves, who suggested it may be necessary to deliver interventions in groups settings. Fishbein and Ajzen, who developed the TPB, responded by stating that interventions based on their theory are aimed at individuals who do not have an intention to change their behaviour, whereas CBT is normally used to help people carry out intended behaviours. They suggest that very different interventions may be needed to target individuals at different stages of motivation to change [91]. These indicate issues surrounding the feasibility of using CBT techniques in the health behaviour change field. Further research would need to be carried out to find out if this approach could be effective and practical, and there are other approaches, such as motivational interviewing, which have been much more widely applied to the area, and may be considered more useful.

Motivational Interviewing

Motivational interviewing (MI) is a counselling approach which is patient centred yet goal focussed and aims to help individuals resolve ambivalence about behaviour change by developing and reinforcing intrinsic motivation and commitment to change [92]. It is both a counselling style and a set of techniques which are used within a patient centred directive style to understand and elicit behaviour change [93]. The defining tone or 'spirit' of MI is of a collaborative, non-judgemental, empathic and supportive interaction with the patient [94], embracing the patient's own ability to make decisions about their own health. Its aim is to elicit and build on motivation to change from within the individual, working through the perceived pros and cons to behaviour change to resolve ambivalence [95]. It considers readiness or motivation to change to be fluctuating and influenced by interactions with the counsellor, rather than a set variable or personality trait [93]. Resistance from the patient to change (through arguing, humouring, ignoring for example) is viewed as a sign for the practitioner to change tact. Miller and Rollnick emphasise the need to 'roll with resistance' rather than directly challenging it, to avoid engaging in an unhelpful argument where the patient counters arguments *for* change by arguing against. Finally, increasing self-efficacy, or increasing the patient's belief in their ability to change their behaviour, is also central to the approach [92].

MI draws on existing concepts and techniques from behaviour change theories [94]. In contrast to traditional lifestyle advice, MI does not attempt to directly challenge beliefs considered to be erroneous, irrational or maladaptive, but to elicit from the

patient discrepancies in their current behaviour and their core beliefs and values. Information is given, but presented in a neutral way, to allow the patient to evaluate this within their own personal context. In this way the practitioner is there to guide the patient to present the argument for changing behaviour and the plan of action to achieve this [94]. The TTM provides a useful framework for understanding the principles of MI, in that it highlights the need for behaviour change to be targeted at individual stages of readiness to change [96]. MI can therefore be seen as the practical application of TTM based counselling [94]. However, identifying the stage of change a patient is at is not enough, the interviewer will need to use a range of skills and techniques to elicit and respond to the patients own increasing motivation to change (recognised through change talk).

Shinitsky and Kub reviewed the literature bringing together applications of the TTM and the use of MI for motivating behaviour change [76]. They highlighted effective interpersonal skills and attributes central to motivating and supporting patients for behaviour change. Many of these echo the communication skills identified earlier for effective communication in health care. They include: respecting and valuing the patient; a non judgmental style, not labelling; displaying genuine interest; establishing a partnership; empathy and support; assessing knowledge and insight; active listening; paraphrasing; summarising; offering numerous suggestions; and not directly challenging the patient. Specific strategies used within MI to increase motivation to change are: giving advice; removing barriers to change; providing choice; decreasing desirability (of unhealthy behaviours); practising empathy; providing feedback; clarifying goals; and active helping [97]. The literature has also identified a number of barriers that can impede the process of MI, including asking only closed questions, giving limited treatment options, not taking the patient's emotional needs into account and the use of clichés in response to the patients concerns [76].

Originally developed for use among people with alcohol problems, MI has been applied to other behaviours such as weight, drug addiction, exercise and medication adherence [96]. The use of MI in a health setting has enjoyed increasing popularity and is applied in different settings to a number of health behaviours and practiced by numerous professions [98]. SIGN guideline 97 recommends the use of MI and it's adaptations for patients who would benefit from changing health behaviours [10]. Numerous studies have investigated its use, and in a meta-analysis, Hettema and colleagues analysed 72 studies using MI for alcohol, smoking, HIV/AIDS, drug

abuse, treatment compliance, gambling, intimate relationships, water purification/safety, eating disorders, diet and exercise [99]. A wide variety of outcome measures were used (e.g. for alcohol studies included quantity, frequency, intoxication level and alcohol-related problems; for smoking studies included abstinence, quit attempts; for HIV studies included knowledge, behavioural intention and sexual risk behaviours). Average short-term between-group treatment effect size was 0.77, which diminished over time to 0.30. The strongest support was found for interventions in alcohol and drug abuse. The authors identified that results were inconsistent across domains and study design, and suggested that further research was needed to clarify specific variables which increase or decrease the effectiveness of MI interventions.

A recent review of MI within health care settings for weight loss and exercise [100] supported the effectiveness of MI for diet, exercise and adherence. In addition, a meta-analysis [93] demonstrated significant positive results for MI vs. traditional advice giving in 80% of studies where MI was provided by a doctor or a psychologist, and 46% of studies where it was given by other health care providers (e.g. nurses, midwives and politicians). Outcome measures including body mass index, total blood cholesterol, systolic blood pressure, blood alcohol concentration and standard ethanol content were decreased to a clinically relevant extent, and the authors concluded that MI can be used widely for both psychological and physiological benefit. The lower proportion of positive results found in studies using other health care professionals was described by the authors to relate to the design of the study (briefer encounter, less follow up and more 'difficult' subjects), however they also speculate that training and experience are likely to influence the effectiveness of MI. Despite these encouraging results, the popularity of MI style behaviour change counselling across many health related domains was considered unwarranted in a recent systematic literature review [101]. It recommended more research into the skills required, training offered and optimal duration for motivational techniques instead of the current trend to report outcome measures. Researchers also highlighted a lack of evidence on the active components of MI and lack of information in studies about the training and adherence of practitioners [102].

This issue of treatment fidelity is frequently discussed in literature evaluating the use of MI. Hettema and colleagues [99] stated that the skills of MI are not applied in a uniform manner; the approach is often combined with other treatments such as CBT or stress management. In addition, the lack of standardised methods makes comparison of study results across domains difficult. For example, a mean of 9.92

hours training was found for those delivering the motivational intervention, with 74% of the sample receiving standardised training using either a manual or taught course. However, only 21 of the 72 studies they analysed reported assessing the competency of the person delivering the intervention. MI was delivered in 14 different settings by seven different types of professionals. Outcome measures provided just as varied results across all behavioural domains. The varied application of MI makes generalising results difficult, and numerous authors have highlighted the need for further research into treatment fidelity [99; 93; 94].

Brief Intervention

The consultation document 'Better Coronary Heart Disease and Stroke Care' places NHS workers in the role of 'creating the conditions in which people have the confidence, motivation and ability to make healthy choices and providing professional services and support' [1 p.6]. Hospitals have some role in delivering health education, and Haynes found from a sample of recently discharged hospital patients that only 31% would prefer to receive health education on risk related behaviours such as smoking and alcohol at their general practice [103]. Health care staff based in General Practices are well placed to deliver individual health promotion interventions as they are often familiar with patients and have come to know their situation over a number of years. Around 66% of people visit their GP at least once a year with 90% of the population seeing their GP at least once every 5 years [104]. Research suggests a patient centred approach within primary care is acceptable and desired by both health professional and patients. Lewis and colleagues interviewed 18 lay people, 4 GP's and 4 practices nurses from a variety of general practices and community settings across Liverpool. They reported that a majority of patients wished to be involved in decision making on their treatment, also supported by the health professionals. Patients also stated a preference for making lifestyle changes instead of starting a pharmaceutical treatment [105]. The study findings suggest the need to recognise the diversity of patient beliefs, and have open discussion so that patients can contribute to the decision making process. Another study to assess patient views on patient-centred care within general practice consultations reported that the majority of patients (over 80%) preferred this approach. In addition, communication, partnership and health promotion were identified as priorities in achieving this [106].

Recognising potential benefits of using patient-centred behaviour change counselling approaches in primary care settings, brief intervention techniques were developed to

enable succinct assessment and consultation on health behaviour change, in situations where time is often limited [107]. In the main, such interventions aim to address one behaviour at a time and to be used by non-expert staff. A number of terms have been used in the literature to describe these adaptations (e.g. brief motivational interviewing, behaviour change counselling), but for the purposes of this review, we will use the term Brief Intervention, as consistent with NHS Health Scotland (see appendix 3 for explanation of terms). Brief intervention is delivered in the style of MI and concentrates on two key concepts of ambivalence and readiness to change [107]. It uses a selection of strategies built around good rapport, open questions, empathy, being non judgemental, providing information and helping the patient come to their own decisions [102]. Burke & Fair identified four aspects of a brief intervention as: setting an agenda to identify a target behaviour; quick assessment of motivation and confidence; making decisions and setting targets; and exchanging information [14]. Determining a patient's motivation and readiness to change, rolling with resistance and focussing on one behaviour at a time have been identified as key strategies [108]. Runkle and colleagues identified an underlying skill set for effective brief intervention: eliciting change talk, establishing rapport, listening reflectively, displaying empathy, being non-judgemental, assessing readiness to change and summarising [109]. Again, overlap can be seen among these skills and the skills recognised as central to MI, both of which build on the basic communication skills for health professionals identified earlier.

Miller and Rollnick argued that developing the conditions necessary to motivate an individual for change can successfully be achieved with briefer interventional approaches than full MI [97]. One reason for this may be that resolving ambivalence might not take as much time in the context of non-addictive behaviours such as increasing exercise or healthy eating as may be needed for addictive behaviours such as alcohol abuse, for which MI was originally conceptualised [94]. There is considerable evidence in support of the effectiveness of brief intervention within health promotion. Steptoe and colleagues conducted a randomised trial of brief behavioural counselling (brief intervention) carried out by practice nurses, and found positive effects compared to controls (who received usual care based on simple information giving) on measures of fat intake, physical activity and smoking behaviour [110]. There was however, some criticism of the methodological strength of the study (see 111; 112; 113). In a further study, Steptoe and colleagues found similar evidence to support the effectiveness of using a brief behavioural counselling method to increase fruit and vegetable consumption among low income adults [114].

A meta-analysis found that adaptations of MI were as effective as other treatments and more effective than no treatment or a placebo for changing alcohol, drugs, diet, and exercise behaviours [115]. In further evidence, an RCT [116] of adapted MI counselling style vs. usual care (simple information giving) reported positive effects for the MI style approach in increasing activity levels, reducing weight, and lowering blood pressure and cholesterol. The intervention group effects were found to increase with the number of counselling sessions attended. One review concluded that evidence showed MI style brief interventions can be effective even in sessions lasting as little as 15 minutes [93].

A recently published cluster-randomized controlled trial reported a nurse-led cardiovascular risk management intervention to improve lifestyle and risk perception using adapted MI in primary care [117]. The trial involved 615 patients and 25 general practices and had well defined and measured behavioural outcomes of fat and fruit and vegetable consumption; physical exercise; and smoking and alcohol use. The results of the study were that although both the intervention group and usual care control group improved on lifestyle behaviour outcomes, there were no significant differences between them. Satisfaction with communication was significantly higher for the intervention group ($p < 0.01$). These findings appear to provide evidence that brief intervention may not be more effective than usual care for improving lifestyle behaviours; however the authors propose a number of explanations for this apparently negative finding. Firstly, the behavioural outcomes were measured using self-report, which may have introduced social desirability bias. In addition it was suggested that the contrast between the skills and motivation of the nurses in the two groups was not sufficiently different to achieve significant differences in outcome, with some of the control group nurses choosing to have training in MI out with the study. Furthermore, the 1.5 day training in brief motivational intervention may not have been sufficient to develop significantly improved communication skills in the intervention group. However, the results of the study did show that brief intervention led to some lifestyle improvement, and importantly to increased patient satisfaction with communication. The study also provides further evidence of the need for increased focus on training, and clarification of the skills required for brief motivational interventions to be successfully delivered, this view is echoed in two further articles [118; 119].

In conclusion, the evidence summarised provides support for the effectiveness of using a brief motivational counselling technique within primary care in assisting people to change lifestyle behaviours associated with increased risk of CVD.

Training in patient-centred behaviour change counselling

Research has suggested that health professional confidence in using motivational techniques when talking to patients about lifestyle change is low. In a UK study involving General Practitioners (n=279), 79% reported talking to patients about risk reducing lifestyle changes most or all of the time, however their confidence in the efficacy of doing so was reported as low [104]. In another study of attitudes to CVD health promotion among GPs and practice nurses, a perceived lack of efficacy in lifestyle counselling was evident. Respondents considered changing core lifestyle risk factors such as smoking, obesity and physical inactivity to be difficult, and this was found to be associated with levels of confidence in training [120]. Lack of confidence in delivering behaviour change counselling may have a big impact on the effectiveness of the approach. If health professionals lack the skills and/or, motivation to talk to patients about changing health behaviours, this in itself can create a barrier to health behaviour change [14].

There is a lack of consensus in the research literature as to which skills are actually used by health care professionals in lifestyle change consultations [121]. When evaluating the behavioural change counselling skills of nurses working in diabetic care, Lane and colleagues found that none of the nurses had received training in behavioural change methods [108]. Not only do practitioners need to learn new skills to deliver motivational interventions, they need to suppress existing traits which are out with the spirit of MI. This is an important consideration for training, as in addition to learning the basic skills of MI, health professionals need to achieve the spirit of patient-centred counselling styles such as MI. This is likely to require a significant shift away from the traditional medical use of more prescriptive, health professional centred approaches they have been used to in previous training and practice [94].

Recent research examined training for Brief Intervention. Drevenhorn and colleagues explored nurses' competencies in counselling on lifestyle risk factors after a residential training course lasting 3 days [122]. Through the use of video recorded consultations after training it was found that nurses (n=19) introduced lifestyle aspects of treatment more frequently and their consultations were more structured. However, the nurses had difficulty relinquishing their previous style of information giving and demonstrated difficulty in providing support in line with the patient's stage of change. In a randomised controlled trial, Hardcastle and colleagues used two 4-hour training sessions to train the research staff in adapted motivational interviewing

(AMI) intervention [116]. Three recorded and transcribed consultations were used to assess their AMI competency. The authors judged competency by adherence to the spirit of MI i.e. the use of open questions, reflective listening, affirming statements. The researcher's responses were also examined to determine whether or not they were consistent with MI or inconsistent i.e. confronting, directing, advice giving. The results of the study present positive effects for AMI; however the authors felt that better results may have been achieved if they had considered the underlying communication style of the researchers conducting the consultations. This evidence points to the need for greater clarity on the competencies and skills required for MI style interventions such as brief negotiation.

Tools for assessing skills of patient centred behaviour change counselling

Miller suggested that the best way to assess a practitioner's competency in delivering MI was to directly observe practice [123]. In order for researchers to understand and assess the active components of patient centred behaviour intervention methods, a number of tools have been developed and evaluated by research to assess the skills actually being used during consultations.

The MISC [124] was developed by Miller as an initial attempt to produce a scale system for coding MI interactions, to assess adherence to MI skills. It includes ratings for both the interviewer and the interviewees' behaviours, and is time consuming as it can require up to 3 viewings of the interview to complete coding [125]. The interviewer is rated on: acceptance; egalitarianism; empathy; genuineness; warmth; and spirit. All rating scales for these behaviours are 7 point likert scales, and in the first viewing the rater is to give a global rating, based on an impression of how much the skills were used throughout the whole interview. The interviewee is also rated on similar scales for: emotion; cooperation; disclosure; and engagement. Finally the interaction of the interviewer and interviewee is rated in terms of collaboration and benefit. During the second viewing, the rater counts specific behaviours both from the interviewer (e.g. advising, confronting, directing, facilitating, and emphasising control) and interviewee (e.g. arguing, interrupting, and change talk). Finally the whole interview is reviewed to calculate the amount of talk time from both parties [121]. An assessment of the reliability of the MISC tool found the global ratings to have good inter-rater reliability. However the results were less encouraging for the specific behaviour ratings, some of which showed poorer inter-rater reliability [126].

While the MISC can be used as a comprehensive tool for detailed evaluation of MI interactions, MITI was developed as a shorter tool to be used to assess adherence to

MI. It includes two global dimension scores of empathy and MI spirit, which are to be rated on a scale based on the overall interview, as with the MISC. The MITI also includes an element of counting instances of specific behaviours (giving information, asking questions, reflection and MI adherent and non-adherent behaviours) however it only includes the behaviours of the interviewer, not the interviewee [126]. Evaluations of the MITI, using simulated consultations within the context of substance abuse, showed support for the reliability, integrity and validity of the scale [127; 125] Pierson and colleagues suggested it is superior to other scales for assessing fidelity to MI skills, where information on patient behaviours is not sought [125].

The existing tools for assessing MI skills may be considered to be too lengthy and comprehensive for the assessment of briefer interventions, and this led to the development of the Behaviour Change Counselling Index (BECCI) [121]. The BECCI uses a user friendly one pass system, allowing quick assessment of a recorded consultation. It contains a checklist to assess health care practitioners' aptitude in brief behaviour change counselling skills (see appendix 4 for checklist items). Each of the 11 items on the checklist is scored on a likert scale to reflect the degree to which the action is carried out. As with the MITI [126], it concentrates on the activities of the practitioner and not what the patient is saying. The BECCI was found to have good internal consistency, inter and intra-rater reliability, and responsiveness (to change before and after training) [121]. Testing of the tool was conducted using simulated consultations; however the authors reported further research planned to test the tool for reliability and validity in real life scenarios. The BECCI therefore represents a very useful tool for training and providing feedback to those delivering brief interventions for health behaviour change in primary care settings.

This concludes the section on patient-centred styles of counselling for behaviour change. In summary, Brief Intervention has a robust evidence base for changing behaviours. However, for it to be successfully adopted in clinical practice, more research is needed to determine the barriers and enhancers of its delivery. This literature review has identified key skills and competencies required to conduct Brief intervention, in addition to tools which can be used to analyse filmed consultations to assist in training and measuring treatment fidelity.

HEALTH PROFESSIONAL-PATIENT INTERACTION DURING BEHAVIOUR CHANGE COUNSELLING

Behaviour change consultations between health professionals and patients do not take place within a vacuum. In addition to understanding the way in which patients think about behaviour change, and identifying good communication skills and styles on the part of the health professional, it is important to consider other factors which may influence interaction between the patient and health professional during the consultation. This section will explore such factors and consider their potential impact on creating the conditions necessary to facilitate successful behaviour change.

The influence of information technology

The influence of computer technology on the interaction between health care professionals and patients has been a more recent focus of research. Evidence suggests that the introduction of computerised systems in general practice consulting rooms can have both positive and negative effects on the interactions taking place during consultations. Research showing computer technology to be beneficial includes an American study using questionnaires to assess patient (n=313) views on the introduction of computers. They found increased patient satisfaction in areas such as the interaction and overall visit, familiarity, communication and comprehension [128]. In addition, a recent literature review looking at the effect of electronic medical records on doctor-patient communication found them to have a positive influence on fact finding and information exchange [129].

However, research has also found that computer use negatively impacted on patient centeredness during the consultation and the establishment of rapport between the doctor and the patient [129]. This may be explained by the influence of computer technology on behaviours and communication skills used by the health professional. These may include behaviours which are detrimental to the doctor-patient interaction, such as preoccupation with the computer; delaying talking until finished with the computer; and averting gaze from the patient [130]. Less research has focussed on nurse-patient interactions, but in a study examining nurses' consultations with diabetic patients [131] Rhodes and colleagues found that nurses who concentrate primarily (gaze and body orientation) on the computer tend to marginalise patients. They state that directing eye contact, gaze direction and body orientation towards the patient demonstrates that the nurse is listening to them, however turning towards the computer illustrates that the health professionals primary focus is the on the computer and not the patient. These behaviours can in turn effect the reactions of the

patient and they noted that a patient could be dissuaded from talking when the nurse averted her gaze towards the computer. The study found that patients' participation in consultations was inhibited by the bureaucratic style of use of the computer template (where the nurse spent 66% of the entire consultation gazing at the computer), whereas a more patient centred style (where the nurse only spent 24% of the consultation gazing at the computer) allowed the patient to become more engaged in the consultation. This is especially important in view of the emphasis on patient-centred behaviour change counselling styles highlighted in previous sections. This study involved nurses who were following a standardised template, as is the case in Keep Well consultations and suggests the importance of considering the influence of the use of computer templates, on achieving a successful patient-centred style.

These findings highlight that negative effects of information technology on the nurse-patient interaction are not a necessary consequence but depend on the skills exhibited by the nurse, such as being able to shift gaze between the screen and the patient [131]. Shachak & Reis also referred to the importance of skills and behaviours demonstrated by doctors in overcoming the potential negative impact of computer use. They point to better design of computerised medical records and communication training as potential facilitators to the successful integration of computers into consultations [129].

It may be that health care professionals are not aware of the impact of their style of computer use on the consultation dynamic. A study involving 39 videotaped consultations with 5 Danish GP's reported that after viewing their recorded consultations, all the GPs said they would change the way they used the computer in future. They reported seeing the computer as a possible intruder between themselves and the patient during the consultation and all planned to use it less in the future [132].

It appears then that the skills and communication behaviours demonstrated by health professionals when using computer technology in a consultation can impact on the quality of interaction with the patient. There is also some evidence of patient variables contributing to how the interaction is affected. Patients who have more experience with computers have reported being less concerned by their use in the consultation than patients who have little computer experience [133]. Patients have also reported being more comfortable with the use of computers in a consultation if

they have been shown the screen or had an explanation of the computers function from the GP [132].

Environmental and social influences

Winefield described factors which impact on doctor-patient communication including: training and education; informal learning; peer reinforcement; cultural expectations of role; and financial issues (which may encourage keeping the consultation as short as possible) [134]. This highlights the importance of organizational, economic and social influences on individual behaviour change consultations.

Time constraints on the health care practitioner are a factor which may act as a barrier to effective health behaviour change communication. A practice nurse survey [135] found the average number of appointments allocated per day to a practice nurse was 26 with an average time of 15 minutes. A Keep Well consultation takes around 45 minutes and if not carefully integrated into a nurse's schedule the pressure of other appointments could affect the quality of behaviour change intervention a patient receives. However, in developing briefer forms of MI for behaviour change, Rollnick and Heather suggested that 5-15 minutes of effective time used to motivate someone towards behaviour change could lead to better outcomes and perhaps even save time, compared to using this time giving information and advice to someone who is not ready for it [107].

In terms of the influence of the social environment, it has been suggested that attributes common to members of different socioeconomic status (SES) groups may act as barriers to attempts to change health behaviour. Michie and colleagues reported that belonging to a lower SES group is associated with fewer healthy behaviours and worse health outcomes than those from higher SES groups [136]. There is evidence to suggest that patients from lower SES groups and those who are less educated are more likely to consume obesity promoting energy-dense foods and generally have a poorer quality diet than those from higher SES groups [137]. In addition, Wardle & Griffith found that individuals from higher SES groups were more likely to monitor their weight more closely, define themselves as overweight, make attempts to lose weight, and take part in more vigorous physical activity than those in lower SES groups [138]. Such social differences may represent barriers to changing behaviour with patients from lower socioeconomic groups and need to be recognised within individually tailored interventions. This is not to say that interventions will

necessarily be ineffective in these groups however. In a review of interventions targeted specifically at low SES groups for reducing smoking behaviour, unhealthy eating, or increasing physical activity levels, Michie and colleagues identified a number of interventions reporting positive results [136].

It has also been suggested that the way in which health professionals interact with patients may be influenced by social status. Patients who are more educated, and those from a higher SES group, are given more information in their consultations with health professionals, and are given longer consultation time than those from lower SES groups and more poorly educated individuals [139].

The influence of individual differences between health professionals

As mentioned earlier, adopting a more patient-centred approach to behaviour change intervention may require a degree of change in attitudes and practice for some health professionals. Individual motivation to change, economic, organizational and political factors have been suggested to influence the clinical practice of healthcare professionals in relation to bringing their own practice into line with evidence to achieve effective and evidence based patient care [140]. Earlier in this review the influence of socio-cognitive factors on patient health behaviours and health behaviour change were considered. Health professionals will also be influenced by social-cognitive factors, and this formed the basis of a systematic review conducted by Godin and colleagues [141]. They suggested that understanding why health professionals do or do not translate current evidence for best practice into practice can be achieved by looking to social-cognitive theories in the same way as for understanding health-related behaviour in patients. From their review they identified a number of variables relating to health professionals which were significantly associated with their behaviour in practice. These included factors such as beliefs, knowledge, social influences, past behaviour, moral norms and beliefs about capabilities. This evidence is important in terms of highlighting the influence of the health professionals' individual characteristics on the behaviour change consultation. In addition, it suggests that the successful adoption of evidence based techniques for behaviour change counselling, such as MI, may be dependent on health professional variables.

The gender of the health professional involved in the health care consultation has also been suggested to effect the interaction. Hall found that patients reported liking female doctors more than male doctors [142], and a meta-analysis conducted by

Roter and colleagues [143], found female doctors to spend more time with patients, elicit more discussion of psychological and emotional topics, and display more 'partnership building' and positive verbal and non-verbal behaviour than their male counterparts. Gender differences have also been studied in terms of the way in which male and female patients are viewed by health professionals. A qualitative study investigating health professionals' views about men consulting with GPs found men to be viewed as 'passive, irresponsible and childlike' concerning health matters, compared to female patients, who were seen as 'responsible and health conscious'. In addition, men were seen as stoical and not good at discussing emotional issues [144]. This may be important in terms of whether the use of motivational style counselling techniques differ between genders.

A final consideration in terms of the influence of the health professional conducting the behaviour change intervention is the issue of *who* the health professional is. More intensive behaviour change approaches such as MI have traditionally been carried out by psychology or counselling professionals with significant amounts of training [94]. Brief intervention studies within health promotion settings have more commonly used nurses for the delivery of such interventions [e.g. 110; 114]. A review of the literature to date could find no evidence of the specific influences of the type of health care professional delivering patient-centred counselling. A systematic review of studies comparing the care of nurse practitioners and doctors in primary care concluded that nurses can provide the equal if not improved quality of care as measured by patient satisfaction [145].

SUMMARY OF SKILLS/COMPETENCIES

The table below summarises skills and attributes necessary for effective behaviour change consultations, as well as potential barriers to using these skills. These have been drawn from the evidence considered in this literature review.

| Skill Type | Description | References |
|---|---|--|
| Key Communication skills for Health Professionals | <p>Style</p> <ul style="list-style-type: none"> • Supportive / empathic / warm style of interaction. • Genuineness • Positivity • Comforting / caring • Respect • Non-judgemental • Mutual trust • Intimacy and reciprocity <p>Techniques</p> <ul style="list-style-type: none"> • Asking open questions • Active listening | <p>[15;22;30;76;97;107;109]</p> <p>[14;76]</p> <p>[14;30]</p> <p>[28]</p> <p>[14;76]</p> <p>[76; 107;109]</p> <p>[14]</p> <p>[14]</p> <p>[15; 25;107; 23]</p> <p>[14;76]</p> |

| | |
|---|--|
| | <ul style="list-style-type: none"> • Paraphrasing [14;76] • Reflecting [14;109] • Summarising [14;30;76;109] • Not interrupting [30] • Use of social conversation [24] • Giving appropriate amount of information at time and level appropriate to mental capacity of patient [29] • Placing discussion in context of patient lifestyle [29] • Discussing personal as well as technical information [30] • Picking up on patient cues [30] • Encouraging patient to ask questions [15] |
| Good non-verbal communication skills | <ul style="list-style-type: none"> • Touch (to demonstrate caring attitude and empathy) [32] • Sit squarely in relation to patient [35] • Open posture [35] • Lean forward at times during consultation [35] • Eye contact [35] • Relax [35] |

| Communication Barriers | | |
|------------------------|---|----------|
| | Personal | |
| | • Negative attitudes, lack of inclination or lack of importance attached to using good communication skills | [18] |
| | • Not wanting to discuss difficult topics | [18] |
| | • Low confidence / concerns over confidentiality | [18] |
| | • Tiredness / stress (& lack of support) | [18; 39] |
| | • Language competency | [18] |
| | Styles | |
| | • Using medical jargon | [37] |
| | • Expressing strong opinion | [37] |
| | • Using generalised statements | [37] |
| | • Offering advice too early | [25] |
| | • Brushing off distress | [25] |
| | • Only discussing physical issues | [25] |
| | • Changing the subject | [25] |
| | • 'Jollyng' patient along | [25] |

| | | |
|---|---|---|
| | <p>Organisational / environmental</p> <ul style="list-style-type: none"> • Time constraints • Work pressure • Interruptions / noise • Lack of training • Workplace policy and culture • Health and wellbeing of patient | <p>[18]</p> <p>[18]</p> <p>[40; 18; 39]</p> <p>[38]</p> <p>[39]</p> <p>[40]</p> |
| <p>Patient-centred counselling techniques for behaviour change</p> | <p>Style</p> <ul style="list-style-type: none"> • Establishing a partnership / good rapport with patient • Open style (allowing patient more control over topics of discussion) • Shared decision making <p>Techniques /strategies</p> <ul style="list-style-type: none"> • Setting an agenda and identifying target behaviour • Assessing knowledge and insight • Assessing motivation (readiness for change) and confidence • Giving clear advice / information • Offering numerous suggestions; providing choice | <p>[76;107;109]</p> <p>[30]</p> <p>[15]</p> <p>[14;108]</p> <p>[76]</p> <p>[14;108;109]</p> <p>[15;97;107]</p> <p>[76;97]</p> |

| | | |
|--|---|---|
| | <ul style="list-style-type: none"> • Not directly challenging the patient • Rolling with resistance • Discussion of outcome expectations • Removing barriers to change • Decreasing desirability of unhealthy behaviours • Providing feedback • Negotiating and clarifying goals / targets • Active helping • Helping patient come to their own decisions • Eliciting 'change talk' | <p>[76]</p> <p>[108]</p> <p>[24]</p> <p>[97]</p> <p>[97]</p> <p>[97]</p> <p>[15;97;14]</p> <p>[97]</p> <p>[107;14]</p> <p>[109]</p> |
| Barriers to patient-centred counselling | <ul style="list-style-type: none"> • Asking only closed questions • Not taking the emotional needs of the patient into account • Giving limited options • Using clichés in response to patient concerns | <p>[76]</p> <p>[76]</p> <p>[76]</p> <p>[76]</p> |

CONCLUSION AND IMPLICATIONS FOR RESEARCH

Summary of literature review findings

CVD was established as a major cause of ill health and mortality and in Scotland in particular, significant health inequalities were identified, with those from more deprived areas being most affected [1]. The shifting government focus away from mass health promotion campaigns towards anticipatory care and more individualised health promotion was reflected in the establishment of the 'Keep Well' programme, with an aim to preventing coronary heart disease in those at high risk, in the most deprived areas of the country [4]. A major facet of the programme is on planned health check consultations, where individual CVD risk is assessed and tailored lifestyle counselling is offered to address lifestyle behaviours associated with increased risk of developing CVD.

A local evaluation priority established by the national evaluation team for Keep Well was to consider in depth the process of what happens during a Keep Well planned consultation, to capture the interactions taking place. Not enough is currently known about how health professionals interact with patients in this context, and it is important to establish feasibility and facilitators and barriers to the process before the pilot project is rolled out fully. The aim of this literature review therefore was to support the study 'Exploring Health Professional Competencies in Keep Well Planned Consultations (North & East Glasgow)'. Specifically, it was conducted in order to identify a framework of key skills and competencies required of health professionals to effectively engage with patients when consulting on lifestyle health behaviour change in the context of Keep Well appointments.

The literature revealed a number of key communication skills and techniques for health professionals, as well as identifying potential barriers which can hinder interactions. Training was identified as key to ensuring that health professionals have the skills and confidence to communicating effectively with patients about changing lifestyle behaviours.

The wealth of literature on the psychological models of behaviour change was considered, and despite recognising significant overlap in concepts and wide variation in design and outcome measurements of studies, a number of key concepts emerged in understanding the process of changing health behaviour on an individual level.

A patient-centred approach to health promotion, with more emphasis on patients' existing knowledge and choice, was illustrated as central to current approaches to health promotion. Motivational Interviewing was identified as one of the most widely utilised and evaluated approaches for engaging with patients within this paradigm, and the evidence demonstrated that it appears effective when applied to health behaviour

change. Specifically within the context of general practice, where resources and time are limited, brief intervention, in keeping with the general approach and tone of MI was identified as a potentially useful way to increase patients' readiness and motivation to change health behaviours and reduce risk of CVD.

A number of key skills and strategies were identified from the literature as being key to delivering successful brief intervention, many of which overlapped with key communication skills identified earlier. A number of tools were developed to assess the use of MI skills, and for brief intervention, the BECCI was identified as a validated tool for measuring fidelity to the approach [121].

Finally, further potential influences on doctor-patient interaction were considered, in order to understand the consultation in the broader social-environmental context.

Implications for design and analysis of study

From this review, a framework of key skills and competencies was identified for effective brief motivational interventions to promote behaviour change; in answer to the first research question (What core consultation competency framework is required of health professionals to deliver the objectives of Keep Well?). This will form the basis of designing and analysing the current study, to explore whether the skills and competencies identified within the framework are being used in actual Keep Well consultations. The study will be qualitative in design, as the aim is to explore and describe the consultation process. Observation, interview and questionnaire methods will be used to answer the research questions outlined by the study. The use of within method triangulation of data collection methods was suggested as being useful for increasing the 'completeness and confirmation of data in research findings of qualitative research' [146].

What people say often differs from what they do, thus observing actions and listening to what people say in real settings can provide more information than self-report measures. To answer the second research question, (How closely does observed practice within Keep Well consultations fit with this framework?), Keep Well health practitioners and individuals attending consultations will be observed. Observing requires meticulous recording therefore it is proposed to use an unmanned unobtrusive camcorder to capture consultations. Recorded visual material by means of video or camcorder is frequently used in primary care research and training [147]. It is a valuable resource to enable learning and reflection from practice. The use of recorded visual material enables us to explore complex verbal and non-verbal communication in a real world environment. In evaluating a behaviour change counselling training course for nurses, Lane and colleagues found that despite initial reservations about

being recorded, participants found it to be a positive and helpful experience. They also found that nurses were amenable to visual recording and thought that the use of visual recorded material would be more informative than just using audio recordings [108]. A review found no significant evidence to suggest that the behaviour of patients or health care professionals was altered by the recording of the consultation [148]. As such the current study will use visual and audio recording equipment and real world consultations over simulated situations.

Training for practitioners delivering Keep Well planned consultations includes attendance at behaviour change training, which focuses on patient-centred MI style techniques. To assess the extent to which practitioner behaviour during consultations is in keeping with this approach, the BECCI will be used to analyse behaviours during recorded consultations. A number of assessment tools for measuring fidelity to the MI style were discussed earlier in this review, and the BECCI emerged as the best available tool to analyse the content of brief interventions. Good validity and reliability were demonstrated using simulated consultations [121] and it is quick to use, requiring only one viewing of recorded consultations.

In addition to verbal communication skills, a number of non-verbal communication skills were identified from the literature as key to effective doctor-patient interactions. The SOLER technique [35] for assessing micro-skills of non-verbal communication (see section 3) provides a tool for assessment, which has been supported by other researchers in the field [149]. Therefore the SOLER will be used in the current study as an observation measure of the use of effective non-verbal communication skills by the health professional during Keep Well consultations.

Using an empathic communication style was identified by the evidence considered in this review as key to effective doctor-patient interactions. The current study will therefore use the Consultation and Relational Empathy (CARE) measure in order to assess patient views on whether the health professional demonstrated an empathic style of communication during the consultation. The CARE measure [150] was developed in Glasgow in order to provide a tool for measurement of the consultation process. It was based on a broad definition of empathy and designed to be meaningful to all patients regardless of their socio-economic background. The measure was developed and validated using quantitative and qualitative approaches, and the final version was found to have good face and content validity and high internal reliability.

REFERENCES

1. Scottish Government - NHS Scotland (2008). *Better Coronary Heart Disease and Stroke Care: A Consultation Document*.
2. National Institute for Health and Clinical Excellence (NICE) (2007). *Behaviour Change at Population, Community and Individual levels. Nice Public guidance 6*. Retrieved on the 16th February, 2010 from the World Wide Web at: <http://www.nice.org.uk/nicemedia/pdf/PH006guidance.pdf>
3. Scottish Executive (2005) *Delivering for Health*.
4. NHS Health Scotland. *Health Scotland.com. Overview of Keep Well*. Retrieved on the 15th February, 2010 from the World Wide Web at: <http://www.healthscotland.com/anticipatory-care-keepwell.aspx#delivering>
5. Fowler, G., Muir Gray, J. A. & Anderson, P. (1993). *Prevention in general practice*. 2nd Edition. Oxford: University Press.
6. Paul, S. & Sneed, N. V. (2004). Strategies for behaviour change in patients with heart failure. *American Journal of Critical Care*, 13, 305 – 313.
7. Sanderson, S. C., Waller, J., Jarvis, M. J., Humphries, S. E. & Wardle, J. (2009). Awareness of lifestyle risk factors for cancer and heart disease among adults in the UK. *Patient Education and Counseling*, 74 (2), 221 – 227.
8. Scottish Government (2007). *Keep Well*. Retrieved 17th February 2010, from the World Wide Web: <http://www.scotland.gov.uk/Topics/Health/health/Inequalities/P2010>.
9. Dawber, TR. Meadors, GF, Moore, FE. (1951). Epidemiological approaches to heart disease: The Framingham Study. *American Journal of Public Health* (41). 279-286.
10. Scottish Intercollegiate Guidelines Network (SIGN) (2007). 97: *Risk estimation and the prevention of cardiovascular disease. A National Clinical Guideline*.
11. *The Assign Score. Prioritising prevention of cardiovascular disease* (2008). NHS Scotland. Retrieved February 16th, 2010, from the World Wide Web: www.assign-score.com
12. Kreps, G. L., Arora, N. K. & Nelson, D. E. (2003). Consumer / provider communication research: directions for development. *Patient Education and Counseling* (50), 3-4.
13. Ley, P. (1997). Compliance among patients. In A. Baum, S. Newman, J. Weinman, R. West, and I. McManus (Eds). *The Cambridge Handbook of psychology, health and medicine*. Cambridge: Cambridge University Press.
14. Burke, L. E. & Fair, J. (2003). Skill sets and attributes of health care providers who deliver behavioural interventions. *Journal of Cardiovascular Nursing*, 18 (4), 256-266.
15. Stewart, M. A. (1995). Effective physician-patient communication and health outcomes: a review. *Canadian Medical Association Journal*, 152 (9), 1423-1433
16. Marvel, K. M., Epstein, R. M., Flowers, K. & Beckman, H. B. (1999). Soliciting the patient's agenda. Have we improved? *The Journal of the American Medical Association*, 281 (3).
17. Makoul, G., Arntson, P. & Schofield, T. (1995). Health promotion in primary care: physician-patient communication and decision making about prescription medications. *Social Science and Medicine*, 41 (9), 1241-1254.
18. Scottish Executive (2003) *Talking Matters - Developing the communication skills of doctors*.
19. Coulter, A. (2002). "After Bristol: putting patients at the centre (Primary Care)". *British Medical Journal*, 324. 7338.
20. *ISD Scotland National Statistics Release* (2009). ISD (Scotland) NHS Complaints. Retrieved on the 16th February from the World Wide Web: http://www.isdscotland.org/isd/servlet/FileBuffer?namedFile=Issues_Scotland_2009_09_A.xls&pContentDispositionType=inline
21. Lyons, A. C., & Chamberlain, K. (2006). *Health Psychology: a critical introduction*. Cambridge University Press.

- 22.** Di Blasi, Z., Harkness, E., Ernst, E., Georgiou, A. & Kleijnen, J. (2001). Influence of context effects on health outcomes: a systematic review. *The Lancet*, 357.
- 23.** Robinson, J. D. & Heritage, J. (2006). Physicians' opening question and patients' satisfaction. *Patient Education and Counseling*, 60, 279 – 285.
- 24.** Van Dulmen, A. M. & Bensing, J. M. (2002). Health promoting effects of the physician-patient encounter. *Psychology, Health & Medicine*, 7 (3), 289 – 300.
- 25.** Maguire, P. & Pitceathly, C. (2002). Key communication skills and how to acquire them (Clinical Review). *British Medical Journal*, 325 (7366), 697.
- 26.** Safran, D. G., Taira, D. A., Rogers, W. H., Kosinski, M., Ware, J. E. & Tarlov, A.R. (1998). Linking primary care performance to outcomes of care. *Journal of family practice*, 47 (3), 213 – 220.
- 27.** Becker, E. R. & Roblin, D. W. (2008). Translating primary care practice climate into patient activation: The role of patient trust in physician. *Medical Care*, 46 (8), 795-805.
- 28.** Thom, D. H. (2001). Physician behaviors that predict patient trust. *The journal of family practice*, 50 (4), 323-328.
- 29.** Eriksson, I. & Nilsson, K. (2008). Preconditions needed for establishing a trusting relationship during health counselling – an interview study. *Journal of Clinical Nursing*, 17, 2352-2359.
- 30.** Silvester, J., Patterson, F., Koczwara, A. & Ferguson, E. (2007). "Trust me...": Psychological and behavioural predictors of perceived physician empathy. *Journal of Applied Psychology*, 92 (2), 519-527.
- 31.** Kreps, G. L. (2001). Consumer / provider communication research: a personal plea to address issues of ecological validity, relational development, message diversity and situational constraints. *Journal of Health Psychology*, 6 (5), 597-601.
- 32.** Wondrak, R. (1998). *Interpersonal skills for nurses and health care professionals*. Oxford: Blackwell science.
- 33.** Ong, L. M. L., de Haes, J. C. J. M., Hoos, A. M. & Lammes, F. B. (1995). Doctor-patient communication – a review of the literature. *Social Science and Medicine*, 40 (7), 903 – 918.
- 34.** Roter, D. L., Frankel, R. M., Hall, J. A. & Sluyter, D. (2006). The expression of emotion through nonverbal behaviour in medical visits. Mechanisms and outcomes. *Journal of General Internal Medicine*, 21, S28 – 34.
- 35.** Egan, G (1998). *The Skilled Helper. A problem-management approach to helping*. Sixth Edition. California: Brooks/Cole Publishing.
- 36.** British Medical Association (2004) *Communication skills education for doctors: An update*.
- 37.** Beckman Murray, R. & Zentner, J.P. (1985). *Nursing concepts for health promotion*. 3rd Ed. Englewood Cliffs, N.J: Prentice Hall International.
- 38.** Coleman, T. Cheater, F. Murphy, E. (2004). Qualitative study investigating the process of giving anti-smoking advice in general practice. *Patient Education and Counselling*, 52.
- 39.** Chant, S., Jenkinson, T., Randle, J. & Russell, G. (2002). Communication skills: some problems in nursing education and practice. *Journal of Clinical Nursing*, 11, 12-21.
- 40.** *NHS Knowledge and Skills Framework and the development review process* (2004). Department of Health. Retrieved 16th February, 2010, from the World Wide Web: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4090861.pdf
- 41.** National Board for Nursing, Midwifery and Health Visiting for Scotland (2001). *The work of newly qualified nurses. Adult Nursing. Core skills and competencies*
- 42.** NHS Education for Scotland (2005). *Coronary heart disease - Core competencies for healthcare staff*. Retrieved on the 16th February 2010, from the World Wide Web at: <http://www.nes.scot.nhs.uk/documents/publications/classa/CHDdocument.pdf>
- 43.** NHS Skills for Health (2009). *Vascular Risk Assessment: Workforce competencies*. Retrieved on the 16th February 2010, from the World Wide Web

at
http://www.skillsforhealth.org.uk/~media/R
esource-
Library/PDF/Prevention%20First_v3.ashx

- 44.** Conner, M. & Norman, P. Eds. (2005). *Predicting Health Behaviour*, Second edition. Glasgow: Open University Press.
- 45.** Horne, R. (1998). Adherence to medication: A review of existing research. In L. B. Myers and K. Midence (Eds) *Adherence to treatment in medical conditions*. Amsterdam, Netherlands: Harwood Academic Publishers.
- 46.** Yarbrough, S. S. & Braden, C. J. (2001) Utility of health belief model as a guide for explaining or predicting breast cancer screening behaviours. *Journal of Advanced Nursing*, 33, 677-88.
- 47.** Thomson, P (1999). A review of behavioural change theories in patient compliance to exercise-based rehabilitation following acute myocardial infarction. *Coronary Health Care*, 3, 18-24.
- 48.** Abraham, C., Sheeran, P. & Johnston, M. (1998). From health beliefs to self-regulation: theoretical advances in the psychology of action control. *Psychology and Health* 13, 569-591
- 49.** Rosenstock, I.M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2, 328-335.
- 50.** Riemsma, R. P., Pattenden, J., Bridle, C., Sowden, A. J., Mather, L., Watt, I. S. et al. (2002). A systematic review of the effectiveness of interventions based on a stages-of-change approach to promote individual behaviour change. *Health Technology Assessment*. 6 (24).
- 51.** Johnston, M. (1995). Interventions in Primary Care: Health related behaviour change. In I. Sharp (Ed) *Preventing coronary heart disease in primary care: The way forward. Report of an expert meeting*. London: HMSO.
- 52.** Thirlaway, K. & Upton, D. (2009). *The psychology of lifestyle: Promoting healthy behaviour*. Routledge.
- 53.** Harrison, J. A., Mullen, P. D. & Green, L. W. (1992). A meta-analysis of studies of the Health Belief Model with adults. *Health Education Research*, 7 (1), 107 – 116.
- 54.** Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behaviour: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- 55.** Ajzen, I. (1988). *Attitudes, Personality and Behaviour*. Milton Keynes: Open University Press.
- 56.** Armitage, C. J. & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40, 471 – 499.
- 57.** Hagger, M. S., Chatzisarantis, N. L. D. & Biddle, S. J. H. (2002). A meta-analytic review of the theories of reasoned action and planned behaviour in physical activity: predictive validity and the contribution of additional variables. *Journal of Sport and Exercise Psychology*, 24, 3 – 32.
- 58.** Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80 (1), 1 – 28.
- 59.** Wallston, K. A., Wallston, B. S. & DeVellis, R. (1978). Development of the multidimensional health locus of control (MHLC) scales. *Health Education and Behaviour*, 6 (1), 160 – 170.
- 60.** Norman, P., Bennett, P., Smith, C. & Murphy, S. (1998). Health locus of control and health behaviour. *Journal of Health Psychology*, 3 (2), 171-180.
- 61.** Ogden, J. (2000) *Health Psychology. A textbook*. Second Edition. Buckingham, Philadelphia: Open University Press.
- 62.** Higgins, E. T. (1987). Self-discrepancy: A theory relating self to affect. *Psychological Review*, 94, 319 – 340.
- 63.** Gollwitzer, P. M. (1993). Goal achievement: the role of intentions. *European Review of Social Psychology*, 4, 142- 185.
- 64.** Gollwitzer, P. M. & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. In: *Advances in Experimental Social Psychology*, vol. 38 Ed. Zanna, M.P. pp. 69 – 119. San Diego, CA, US: Elsevier Academic Press.
- 65.** Weinstein, N. (1984). Why it won't happen to me: perceptions of risk factors

- and susceptibility. *Health Psychology*, 3, 431- 457.
- 66.** Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *The Journal of Psychology*, 91, 93 – 114.
- 67.** Leventhal , H, Safer, M & Panagis, D. (1983). The impact of communications on the self-regulation of health beliefs, decisions and behaviour. *Health Education Quarterly*, 10 (1).
- 68.** Witte, K. & Allen, M. (2000) A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education and Behaviour*, 27 (5), 591 – 615.
- 69.** Schwarzer, R. (1992). Self-efficacy in the adoption and maintenance of health behaviours: theoretical approaches and a new model. In R. Schwarzer (Ed) *Self-efficacy. Thought control of action*. Hemisphere publishing corporation.
- 70.** Rana, D & Upton, D. (2009). *Psychology for nurses*. Harlow, England: Pearson Education.
- 71.** Prochaska, J,O &Di Clemente, C,C. (1983). Stages and processes of self change of smoking: toward a model of change. *Journal of Consulting and Clinical Psychology*. 51 (3), 390 – 395.
- 72.** Weinstein, N. D. (1988). The precaution adoption process. *Health Psychology*, 7, 355 – 386.
- 73.** Zimmerman, G. L., Olsen, C. G. & Bosworth, M. F. (2000). A 'Stages of Change' approach to helping patients change behaviour. *American Family Physician*, 61 (5), 1409 – 1416.
- 74.** Johnston, D. W., Johnston, M., Pollard, B., Kinmonth, A. L., Mant, D. (2005). Motivation is not enough: Prediction of risk behaviour following diagnosis of coronary heart disease from the theory of planned behaviour. *Health Psychology*, 23 (5), 533-538.
- 75.** Prochaska, J.O., DiClemente, C. C. & Norcross, J. C. (1992). In search of how people change. Applications to addictive behaviours. *American Psychologist*, 47 (9), pp. 1102 – 1114.
- 76.** Shinitzky, H and Kub, J. (2001). The Art of Motivating Behaviour Change: The use of motivational interviewing to promote health. *Public Health Nursing*, 18 (3), 178-185.
- 77.** Van Sluijs , E. M. F., Van Poppel, M. N. M. & Van Mechelen, W. (2004). Stage-based lifestyle interventions in primary care: Are they effective? *American Journal of Preventative Medicine*. 26 (4), 330 – 343.
- 78.** Povey, R., Conner, M., Sparks, P., James, R. & Shepherd, R. (1999). A critical examination of the application of the transtheoretical model's stages of change to dietary behaviours. *Health Education Research*, 14 (5), 641 – 651.
- 79.** Sutton, S. R. (1996). Can 'stages of change' provide guidance in the treatment of addictions? A critical examination of Prochaska and DiClemente's model, In G. Edwards & C. Dare (Eds) *Psychotherapy, psychological treatments and the addictions*. Cambridge: Cambridge University Press.
- 80.** Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology and Health*, 13, 623 – 649.
- 81.** Budd, R. J. & Rollnick, S. (1996). The structure of the readiness to change questionnaire: a test of Prochaska and DiClemente's transtheoretical model. *British Journal of Health Psychology*, 1, 365 – 376.
- 82.** Michie, S. & Abraham, C. (2004). Interventions to change health behaviours: Evidence-based or evidence-inspired? *Psychology and Health*, 19 (1), 29 – 49.
- 83.** Abraham, C. & Michie, S. (2008). A Taxonomy of behaviour change techniques used in interventions. *Health Psychology*, 27 (3), 379 – 387.
- 84.** Noar, S. M. & Zimmerman, R. S. (2005). Health behaviour theory and cumulative knowledge regarding health behaviours: are we moving in the right direction? *Health Education Research*, 20 (3), 275 – 290.
- 85.** Michie, S., Miles, J. & Weinman, J. (2003). Patient-centeredness in chronic illness: what is it and does it matter?

Patient Education and Counseling, (51), 197 – 206.

86. Edwards, A., Elwyn, G., Wood, F., Atwell, C., Prior, L. & Houston, H. (2005). Shared decision making and risk communication in practice: a qualitative study of GP's experiences. *The British Journal of General Practice: The journal of the royal college of general practitioners*, 55 (510), 6 – 13.

87. Michie, S. (2005). Is cognitive behaviour therapy effective for changing health behaviours? Commentary on Hobbis and Sutton. *Journal of Health Psychology*, 10 (1), 33 – 36.

88. Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. Oxford, England: International Universities Press

89. Dunn, A. L., Marcus, B. H., Kampert, J. B., Garcia, M. E., Kohl, H. W. & Blair, S. N. (1999). Comparison of lifestyle and structured interventions to increase physical activity and cardiorespiratory fitness: A randomised trial. *Journal of the American Medical Association*, 281 (4), 327 – 334.

90. Hobbis, I. C. A. & Sutton, S. (2005) Are techniques used in cognitive behaviour therapy applicable to behaviour change interventions based on the Theory of Planned Behaviour? *Journal of Health Psychology*, 10 (1), 7 – 18.

91. Fishbein, M. & Ajzen, I. (2005). Theory-based behaviour change interventions: Comments on Hobbis and Sutton. *Journal of Health Psychology*, 10 (1), 27 – 31.

92. Miller, W. R. & Rollnick, S. (2002). *Motivational interviewing: preparing people for change*. New York, N.Y.; London: Guildford Press.

93. Rubak, S., Sandbaek, A., Lauritzen, T. & Christensen, B. (2005). Motivational Interviewing: a systematic review and meta-analysis. *British Journal of General Practice*, 55 (513), 305 – 312.

94. Resnicow, K., Dilorio, C., Soet, J. E., Borrelli, B., Hecht, J. & Ernst, D. (2002). Motivational interviewing in health promotion: Is sounds like something is changing. *Health Psychology*, 21 (5), 444 – 451.

95. Britt, E., Hudson, S. M. & Blampied, N. M. (2004). Motivational Interviewing in

health settings: a review. *Patient Education and Counseling*, 53, 147 – 155.

96. Rollnick, S., Kinnersley, P. & Stott, N. (1993). Methods of helping patients with behaviour change. *British Medical Journal*, 307 (6897), 188.

97. Miller, W. R. & Rollnick, S. (1991). *Motivational Interviewing: Preparing people to change addictive behaviour*. New York, N.Y.; London: Guildford Press.

98. Martins, R. K. & McNeil, D. W. (2009). Review of Motivational Interviewing in promoting health behaviours. *Clinical Psychology Review*, 29, 283 – 293.

99. Hettema, J., Steele, J. & Miller, W. R. (2005). Motivational Interviewing. *Annual Review of Clinical Psychology*, 1, 91 – 111.

100. Van Dorsten, B. (2007). The use of motivational interviewing in weight loss. *Current Diabetes Reports*, 7, 386-390.

101. Knight, K. M., McGowan, L., Dickens, C. & Bundy, C. (2006). A systematic review of motivational interviewing in physical health care settings. *British Journal of Health Psychology*, 11 (pt2), 319 – 332.

102. Moyers, T. B., Martin, T., Manuel, J. K., Hendrickson, S. M. L., & Miller, W. R. (2005). Assessing competence in the use of motivational interviewing. *Journal of Substance Abuse Treatment*, 28(1), 19-26.

103. Haynes, C. L. (2008). Health promotion services for lifestyle development within a UK hospital – Patients' experiences and views. *BMC Public Health*, 8, (284).

104. McAvoy, B., Kaner, E. F., Lock, C. A., Heather, N. & Gilvarry, E. (1999). Our Healthier Nation: are general practitioners willing and able to deliver? A survey of attitudes to and involvement in health promotion and lifestyle counselling. *British Journal of General Practice*, 49 (440), 187 – 190.

105. Lewis, D. Robinson, J. Wilkinson, E. (2003). Factors involved in deciding to start preventative treatment: qualitative study of clinicians' and lay people's attitudes. *British Medical Journal*, 327.

106. Little, P., Everitt, H., Williamson, I., Warner, G., Moore, M., Gould, C., et al. (2001). Preferences of patients for patient

- centred approach to consultation in primary care: observational study. *British Medical Journal*, 322, 468 – 472.
- 107.** Rollnick, S. & Heather, N. (1992). Negotiating Behaviour change in medical settings. The development of brief motivational interviewing. *Journal of mental Health*, 1, 25-38.
- 108.** Lane, C., Johnson, S., Rollnick, S., Edwards, K. & Lyons, M. (2003). Consulting about lifestyle change: Evaluation of a training course specialist diabetes nurses. *Practical Diabetes International*, 20 (6).
- 109.** Runkle, C., Osterholm, A., Hoban, R., McAdam, E. & Tull, R. (2000). Brief Negotiation Program for promoting behaviour change: The Kaiser Permanente Approach to continuing professional development. *Education for Health*, 13(3), 377-386.
- 110.** Steptoe, A., Doherty, S., Rink, E., Kerry, S., Kendrick, T. & Hilton, S. (1999b). Behavioural counselling in general practice for the promotion of healthy behaviour among adults at increased risk of coronary heart disease: randomised trial. *British Medical Journal*, 319, 943 – 948. .
- 111.** Hobbs, R. F. D. (2000). Behavioural counselling in general practice about risk of CHD: Study was grossly underpowered. *British Medical Journal*, 321 (7252), 49.
- 112.** Smith, D. G., Ebrahim, S. & Bennett, R. (2000). Behavioural counselling in general practice about risks of CHD: Non-attendance for follow up distorts results and shows that people don't like counselling. *British Medical Journal*, 321 (7252), 50.
- 113.** Frost, G. & Dore, C. (2000) Behavioural counselling in general practice about risk of CHD: Study had several methodological flaws. *British Medical Journal*, 321 (7252), 49.
- 114.** Steptoe, A., Perkins-Porras, L., McKay, C., Rink, E., Hilton, S. & Cappuccio, F.P. (2003) Behavioural counselling to increase consumption of fruit and vegetables in low income adults: randomised trial. *British Medical Journal*, 326 (855).
- 115.** Burke, B., Arkowitz, H. & Menchola, M. (2003). The Efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. *Journal of consulting and Clinical Psychology*, 71 (5), 843-861.
- 116.** Hardcastle, S., Taylor, A., Bailey, M. & Castle, R. (2008). A randomised controlled trial on the effectiveness of a primary health care based counselling intervention on physical activity, diet and CHD risk factors. *Patient Education and Counselling*, 70.
- 117.** Koelewijn-van Loon, M. S., van der Weijden, T., Ronda, G., van Steenkiste, B., Winkens, B., Elwyn, G. et al. (2010). Improving lifestyle and risk perception through patient involvement in nurse-led cardiovascular risk management: A cluster randomized controlled trial in primary care. *Preventive Medicine*, 50, 35 – 44.
- 118.** Steptoe, A., Kerry, S., Rink, E. & Hilton, S. (2001). The impact of behavioural counseling on the stage of change in fat intake, physical activity and cigarette smoking in adults at increased risk of coronary heart disease. *American Journal of Public Health*, 91 (2), 265 – 269.
- 119.** Dunn, C., Deroo, L. & Rivara, F. P. (2001). The use of brief interventions adapted from motivational interviewing across behavioural domains: a systematic review. *Addiction*, 96, 1725 – 1742.
- 120.** Steptoe, A., Doherty, S., Kendrick, T., Rink, E. & Hilton, S. (1999a). Attitudes to cardiovascular health promotion among GPs and practice nurses. *Family Practice*, 16 (2), 158 – 163.
- 121.** Lane C, Huws-Thomas M, Hood K, Rollnick S, Edwards K, Robling M (2005). Measuring adaptations of motivational interviewing: The development and validation of the Behaviour Change Counselling Index (BECCI). *Patient Education and Counselling* 56(2), 166-73.
- 122.** Drevenhorn, E., Bengtson, A., Allen, J. K., Saljo, R. & Kjellgren, K. I. (2007). Counselling on lifestyle factors in hypertension after training on the stages of change model. *European Journal of cardiovascular Nursing*, 6 (1), 46 – 53.
- 123.** Allsop, S. (2007). What is this thing called motivational interviewing? *Addiction*, 102, 343-345.
- 124.** *Motivational Interviewing Skill Code (MISC) Coder's Manual* (2000). Miller, W. R. Retrieved February 17th 2010, from the

- 125.** Pierson, H. M., Hayes, S. C., Gifford, E. V., Roget, N., Padilla, M., Bissett, R. et al. (2007). An examination of the Motivational Interviewing Treatment Integrity code. *Journal of Substance Abuse Treatment, 32*, 11 – 17.
- 126.** Moyers, T., Martin, T., Catley, D., Harris, K. J. & Ahluwalia, J. S. (2003). Assessing the integrity of motivational interventions: Reliability of the Motivational Interviewing Skills Code. *Behavioural and Cognitive Psychotherapy, 31*, 177 – 184.
- 127.** Bennett, G. A., Roberts, H. A., Vaughan, T. E., Gibbins, J. A. & Rouse, L. (2007). Evaluating a method of assessing competence in Motivational Interviewing: A study using simulated patients in the United Kingdom. *Addictive Behaviours, 32*, 69 – 79.
- 128.** Hsu, J., Huang, J., Fung, V., Robertson, N., Jimison, H. & Frankel, R. (2005). Health Information Technology and physician-patient interactions: Impact of computers on communication during outpatient primary care visits. *Journal of American Medical Association, 298*, 474 – 480.
- 129.** Shachak, A. & Reis, S. (2009). The impact of electronic medical records on patient-doctor communication during consultation: a narrative literature review. *Journal of evaluation in Clinical Practice, 15*(4), 641 – 649.
- 130.** Greatbatch, D., Heath, C., Campion, P. & Luff, P. (1995). How do desk-top computers affect the doctor-patient interaction? *Family Practice, 12* (1), 32 – 36.
- 131.** Rhodes, P., Small, N., Rowley, E., Langdon, M., Ariss, S. & Wright, J. (2008). Electronic Medical Records in diabetes consultations: Participants' gaze as an interactional resource. *Qualitative Health Research, 18* (9), 1247 – 1263.
- 132.** Als, A. B. (1997). The desk-top computer as a magic box: patterns of behaviour connected with the desk-top computer; GPs' and patients' perceptions. *Family Practice, 14* (1), 17 – 23.
- 133.** Garcia-Sanchez, R. (2008). The patient's perspective of computerised records: a questionnaire survey in primary care. *Informatics in Primary Care, 16* (2), 93 – 99.
- 134.** Winefield, H. R. (1992). Doctor-patient communication: an interpersonal helping process. In S. Maes, H. Leventhal & M. Johnston (Eds) *International Review of Health Psychology, 1*. Chichester: John Wiley.
- 135.** O'Donnell, C.A., Jabareen, H. & Watt, G. C. M. (2010). Practice nurses' workload, career intentions and the impact of professional isolation: a cross-sectional survey. *BMC Nursing, 9* (2).
- 136.** Michie, S., Jochelson, K., Markham, W. A. & Bridle, C. (2008). Low income groups and behaviour change interventions. A review of intervention content and effectiveness. *Kings Fund, March 2008. Kicking bad habits*.
- 137.** Drenowski, A. & Spector, S. E. (2004). Poverty and obesity: the role of energy density and energy costs. *American Journal of Clinical Nutrition, 79* (1), 6 – 16.
- 138.** Wardle, J. & Griffith, J. (2001). Socioeconomic status and weight control practices in British adults. *Journal of Epidemiology and Community Health, 55* (3), 185 – 190.
- 139.** Roter, D. L. & Hall, J. A. (2006). *Doctors talking with patients/patients talking with doctors. Improving communication in medical visits*. Second Edition. Westport, Conn: Praeger.
- 140.** Grol, R. & Wensing, M. (2004) What drives change? Barriers to and incentives for achieving evidence based practice. *Medical Journal of Australia, 180*, S57 – 60.
- 141.** Godin, G., Belanger-Gravel, A., Eccles, M. & Grimshaw, J. (2008). Healthcare professionals' intentions and behaviours: A systematic review of studies based on social cognitive theories. *Implementation Science, 3* (36)
- 142.** Hall, J. A. (2003). Some observations on provider-patient communication research. *Patient Education and Counseling, 50*, pp. 9 – 12.
- 143.** Roter, D. L., Hall, J. A. & Aoki, Y. (2002). Physician gender effects in medical communication: a meta-analytic review. *Journal of the American Medical Association, 288*, 756 – 764.

- 144.** Seymour-Smith, S., Wetherell, M & Phoenix, A. (2002). 'My wife ordered me to come!': A discursive analysis of doctors' and nurses' accounts of men's use of general practitioners. *Journal of Health Psychology, 7*, 253 – 267.
- 145.** Horrocks, S., Anderson, E., Salisbury, C. (2002). Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors (Primary Care). *British Medical Journal, 324* (7341).
- 146.** Thurmond, V. A. (2001). The point of triangulation. *Journal of nursing scholarship, 33* (3), 253 – 258.
- 147.** Heath, C., Luff, P. & SanchezSvensson, M. (2007). Video and qualitative research: analysing medical practice and interaction. *Medical Education, 41*, 109-116.
- 148.** Themessl-Huber, M., Humphris, G., Dowell, J., Macgillivray, S., Rushmer, R. & Williams, B. (2008). Audio-visual recording of patient-GP consultations for research purposes: A literature review on recruiting rates and strategies. *Patient Education and Counseling, 71*(2), 157 – 168.
- 149.** Crouch, A. (2005). Communication skills for holistic health assessment. In A. T. Crouch & C. Meurier (Eds) *Vital notes for nurses: health assessment*. Blackwell Publishing.
- 150.** Mercer, S. W., Maxwell, M., Heaney, D. & Watt, G. C. M. (2004). The consultation and relational empathy (CARE) measure: development and preliminary validation and reliability of an empathy-based consultation process measure. *Family Practice, 21*(6), 699 – 705.

APPENDICES

Appendix 1 – Search strategy for literature review

The following databases were searched for papers from the year 2000 onwards:

Ovid MEDLINE

Embase

PsychINFO

All EBM Reviews

British Nursing Index

Health and Psychosocial Instruments

HMIC Health Management Information Consortium

The databases were searched with the following keywords:

- accident*, angina, anticipatory, anticipatory care, arrhythmia*, assess*, attack*, behavior?r*
adj3 change, cardiovascular, cardiovascular disease*, cardiovascular disease* or stroke* or
cerebrovascular accident* or cerebrovascular incident* or heart failure or agina or heart attack*
or arrhythmia* or peripheral vascular disease* or heart disease* or myocardial infarction* or
diabetes, care, cerebrovascular, cerebrovascular accident*, cerebrovascular
incident*,clinician*, compliance or concordance or adherence or adhere, competenc*,
competenc* or training or educat* or prepar*, consultati* or interview* or appointment*,
diabetes, disease*, doctor*, failure, family, family doctor*, family physician*, family practi*,
general, general practi*, health, health professional* or doctor* or nurs* or counsel?or* or
practitioner* or allied health professional, health promotion, heart, heart attack*, heart
disease*, heart failure, incident*, infarction*, lifestyle change or behavior?r change,lifestyle adj3
chang*), motivational or brief, measure*, miti or becci, myocardial, myocardial infarction*,
nurs*, peripheral, peripheral vascular disease*,physician*, practi*, practitioner* , primary,
primary care, primary health care, promotion, skill*, stroke*, training or educat* or prepar,
vascular

Appendix 2 – NHS Key Skills Framework (NHS KSF)

Dimension HWB1: *Promotion of Health and Wellbeing and Prevention of Adverse Effects on Health and Wellbeing*, contains specific competencies relating to engaging with people to promote health and wellbeing.

HWB1/Level 1: Contribute to promoting health and wellbeing and preventing adverse effects on health and wellbeing. A health professional would be expected to:

- a) Identify factors which have a positive and negative affect on health and wellbeing and how it can be promoted and adverse effects prevented.
- b) Enable people to view health and well being as a positive aspect of their lives
- c) Enable people to be involved in activities and make their own decisions about them consistent with people's views and beliefs.
- d) Undertake planned activities with their agreement consistent with legislation, policies and procedures.
- e) Records and reports back fully on the activities undertaken and alert others in the team to any issues that arise during the activities.

Examples of application of this dimension which are pertinent to Keep Well consultations are:

- Awareness raising
- Enabling people to adopt healthy lifestyles
- Enabling people to look after their own health and wellbeing
- Enabling people to maintain and develop their self-management skills
- Involving people in decision making about their health and wellbeing
- Improving people's resistance
- Providing information and advice on health and wellbeing and stressors to health and wellbeing
- Reducing risks in lifestyles
- Reducing the stressors that effect people's health and wellbeing.

This dimension is supported by Core 1 Communication, which identifies effective communication skills. Competencies required by a health practitioner on Core 1/Level 2 are as follows:

- a) Communicates with a range of people on a range of matters in a form that is appropriate to them and the situation.

- b) Improves the effectiveness of communication through the use of communication skills.
- c) Constructively manages barriers to effective communication.
- d) Keeps accurate and complete records consistent with legislation, policies and procedures.
- e) Communicates in a manner that is consistent with relevant legislation, policies and procedures

Matters that a health practitioner may communicate with a person about include:

- Establishing and maintaining contact with different people.
- Explaining how to do something.
- Making arrangements
- Reporting any changes that are needed.
- Sharing information and opinions.

Appendix 3 – Taxonomy of terms

| | |
|---|--|
| BECCI - Behaviour Change Counselling Index | A tool for measuring behaviour change counselling. |
| Behaviour change counselling | A constructive conversation about change in which the practitioner tries to understand how the patient feels about change by using mostly open questions and sometimes empathic listening statements. |
| Brief Motivational Interventions Also referred to as: <ul style="list-style-type: none"> • Adapted motivational Interviewing • Brief intervention • Motivational intervention • Brief behavioural counselling | A brief intervention is a short, evidence-based, structured conversation about a health issue with a patient that seeks in a non-confrontational way, to motivate and support the client to think about and/or plan behaviour change. Brief intervention will typically consist of one 3-20 minute session, which may be planned, raised by the client or opportunistic and require the practitioner to have some background knowledge of the issues and some training on the basic elements of motivational style interviewing. |
| Cognitive behavioural therapy | Is a structured therapy addressing an individual's core beliefs, assumptions, thinking patterns and behaviour. |
| Health Behaviour Change | A health behaviour change approach is a collection of strategies for structuring a conversation with a patient that guides and enables the person to talk and consider behaviour change and where the patient's concerns are central. |
| MITI - Motivational Interviewing Treatment Integrity | Behavioural coding system for motivational interviewing consultations. |
| MISC - Motivational Interviewing Skill Code | As above |
| MIST-Motivational Interviewing Supervision and Training Scale | As above |
| Motivational interviewing | Motivational interviewing is a collaborative style of conversation which practitioners can use to help patients to explore and resolve their mixed feelings about a behavioural change in a way that enhances their motivation and ability to make positive choices. |
| Stages of change Model | Is an approach which proposes that tailoring interventions to the individuals' readiness to change is more effective than using the same approach for all. |
| Transtheoretical Model (TTM) | TTM is the most widely used stages of change model. The model proposes 6 stages in behaviour change: Precontemplation – not intending to make changes. Contemplation – considering a change. Preparation – making small changes. Action – actively engaging in new behaviour. Maintenance – sustaining change over time. Relapse – relapsing back to an earlier stage. The difference between stages is mediated by the balance of pros and cons of undertaking the change |

Appendix 4 – BECCI (Behaviour Change Counselling Index) checklist Items

Domain 1 - Agenda setting and permission seeking.

1. The practitioner invites the patient to talk about behaviour change.
2. The practitioner demonstrates sensitivity to talking about other issues (anything of concern to the patient).

Domain 2- The why and how of change in behaviour.

3. Practitioner encourages patient to talk about current behaviour or status quo.
4. Practitioner encourages patient to talk about behaviour change.
5. Practitioner asks questions to elicit how patient thinks and feels about the topic.
6. Practitioner uses empathic listening statements when patient talks about the topic.
7. Practitioner uses summaries to bring together what the patient says about the topic.

Domain 3 – The Whole Consultation.

8. Practitioner acknowledges challenges about behaviour change that the patient faces.
9. When practitioner provides information, it is sensitive to patient concerns and understanding.
10. Practitioner actively conveys respect for patient choice about behaviour change.

Domain 4 – Talk about targets.

11. Practitioner and patient exchange ideas about how the patient could change current behaviour.