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# Preventive guidelines in primary health care and shared decision making

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## INTRODUCTION AND BACKGROUND

I have been working in the field of primary health care (PHC) research in Australia since 2009 when I was involved in two systematic reviews, one on access to best practice PHC and one on integrated PHC centres/polyclinics, both supported by funding from the Australian Primary Health Care Research Institute (APHCRI). This experience gave me a solid basis regarding the importance of PHC and especially its role in the prevention of chronic diseases. My current involvement in a large partnership project on implementation of preventive guidelines for chronic disease in Australian general practice and my passion for shared decision making (SDM) in primary care consultations triggered my application for the APHCRI Travel Fellowship. The Netherlands was chosen as the focus of the Travel Fellowship because of its longstanding experience in guideline development and implementation, and its leading teams working in the field of SDM. During my visit to the Department of Primary and Community Care at Radboud University, Nijmegen and the Department of Primary Care at Maastricht University I explored their experience in guideline implementation, research in the field of prevention of chronic disease and SDM. I was also fortunate to visit three GP practices and to observe their work.

## PREVENTION IN PRIMARY HEALTH CARE AND PATIENT-CENTRED APPROACH IN AUSTRALIA

Current reforms in the Australian health care system recommend strengthening PHC services and their role in health promotion, prevention and management of people with chronic diseases. The National Preventive Health Strategy and the first Primary Health Care Strategy recognised the importance of *promoting healthy lifestyles*, including addressing issues of alcohol use, nutrition, smoking and physical activity [1, 2]. The Primary Health Care Strategy suggested that a more systematic approach to preventive care in the Australian PHC system may involve the provision of appropriate and targeted screening services, health checks, and preventive interventions consistent with evidence-based guidelines. The Strategy emphasised the importance of linking or affiliating patients with PHC providers (e.g. registration of patients with diabetes) to support population-based preventive health care and improved referral pathway options and access to allied health services for preventive care [2]. This is confirmed in the National Preventive Health Strategy where patient- and community-centred preventive health care and community involvement in planning and service delivery are shown as among the critical success factors in integrated PHC [1]. There is also emphasis on the need to engage patients as active partners to be more effective in implementing successful preventive care [3]. A recently published report of the Australian Commission on Safety and Quality in Health Care on patient-centred care recommends that “improving patient care experience” be included as an indicator for quality care and reflected in funding models [4].

## WHAT IS KNOWN ABOUT IMPLEMENTATION OF PREVENTIVE GUIDELINES IN PHC?

Despite high-level evidence demonstrating the importance of brief interventions and the quality and wide dissemination of the guidelines, in practice few primary care encounters in Australia involve risk-factor assessment and intervention. A clear limitation of much of the implementation research is the lack of an organisational framework that respects the need for both a systematic and multilevel approach to change and for sufficiently mature and delineated organisations that are ready and equipped for change [5]. This is problematic because the implementation of preventive recommendations depends not only on their quality (i.e. their evidence base) but also on their relevance and suitability for the practice setting and context, the individual capabilities of providers and the capacity of their health

service organisations, as well as the readiness for change of patients, clinicians, and organisations.

Dutch professor Richard Grol developed a model of practice change as a dynamic and comprehensive organisational framework for implementation research [6]. His model manages to incorporate a multilevel approach to change and at the same time to respect the influence of professional values and organisational cultures on change. Grol's model identifies three broad levels influencing practice change: 1) the individual clinician (e.g. knowledge, skills, attitudes, and habits), 2) the social context in which the clinician works (e.g. patients, colleagues, authorities), and 3) the organisational context in which the practice is delivered (e.g. resources, organisational climate, structures).

## THE NEED FOR SHARED DECISION-MAKING IN IMPLEMENTATION OF PREVENTIVE GUIDELINES IN PHC

**Shared decision-making** is defined as a decision making process jointly shared by patients and their health care providers, or as the active participation of patients in decision making or the use of decision aids [7]. When general practitioners (GPs) provide care to patients they often need to seek a balance between application of the recommended guidelines and the patient's competing priorities. At the same time, patients have different needs and priorities, and prioritising their health needs can be challenging. Several studies have reported that the interaction between the health care professional and the patient is an important determinant of the professional's guideline adherence. It requires constant negotiation between the professional and the patient, and the assessment of a patient's risk perception and preferences. Sharing information about the prevention of risk factors in the development of chronic disease and involving patients in the decision making process could facilitate the process of delivery of preventive activities in PHC.

A Cochrane systematic review of 55 randomised controlled trials of SDM programs indicated that compared to usual care, these programs improved people's knowledge of the options, created accurate risk perceptions of their benefits and harms, reduced difficulty of decision making, and increased participation in the process [8].

While there is evident support for SDM in Australia, implementation is limited [9]. There are barriers at different levels in the health care system, which have been described by research teams working in PHC and cancer screening settings. A systematic review exploring barriers and facilitators to implementing SDM in clinical practice concluded that interventions to foster implementation of SDM will need to address a broad range of factors and to target more diverse groups of health professionals, such as nurses and pharmacists [7].

## METHODS

The Fellowship project involved a visit to the Netherlands in October–November 2011. It focused on two core aspects: identification of successful guideline implementation strategies and effective use of SDM for improving patient compliance with GP recommendations.

### **The specific aims of the study were:**

- 1) To identify what Australia might learn from the Netherlands' experience in the area of preventive care and in particular strategies for increasing the use of preventive activities that:
  - are consistent with evidence based guidelines in PHC;
  - include the use of SDM between health care providers and consumers, and/or
  - incorporate links between evidence based preventive activities in PHC and prevention external to the practice, including referral to allied health professionals and public health activities
- 2) To develop approaches applicable to the Australian policy and practice environment in the implementation of preventive guidelines and SDM.
- 3) To identify opportunities for further collaboration with international researchers.

### **The project was conducted in two parts:**

**Part 1: Preparation** – A literature review was undertaken to become informed about the Dutch health care system, the roles of providers in the delivery of PHC, current policies and practices in development and implementation of preventive guidelines in PHC, and implementation of SDM in medical practice. It included also becoming familiar with Heelsum Collaboration workshop publications from 1995 to 2008 to obtain general knowledge about its activities in the field of nutritional advice in primary care. Specific issues were identified to follow up in the Netherlands, and comparable information to take from Australia.

**Part 2: Visit to the Netherlands** – to explore their practices in delivering preventive care, guideline development and implementation and use of SDM approaches. To present to an audience of academics, GPs, students and policymakers the preliminary results from research conducted at CPHCE in relation to preventive activities in PHC, and Australian current policies and practices in support of prevention and patient-centred care.

### **Visit sites:**

The Travel Fellowship was based at two universities in the Netherlands: Maastricht University, Maastricht and Radboud University, Nijmegen. During the visit to Radboud University I made several trips to the following institutions: University of Wageningen, Department of Primary Care and Public Health at Leiden University, Dutch College of General Practitioners, Utrecht, and Netherlands Institute for Health Services Research (NIVEL), Utrecht. I also visited and observed GP consultations at three general practices based in the following towns: Elsloo near Maastricht, Brielle near Rotterdam, and Lent near Nijmegen and a GP post at Maastricht (see Appendix 1).

**At the Department of General Practice, CAPHRI, Maastricht University** my host was Prof. Trudy van der Weijden, who arranged several meetings and presentations to senior staff members, academics, GPs, PhD students and other health professionals (see Appendix 2). She also organized a visit to a GP practice in the town of Elsloo, where I had the opportunity to observe the usual day of a Dutch GP. These meetings involved both learning and exchange about the structure and delivery of PHC, experience with preventive activities, and examples of implementation of SDM in a PHC setting.

**At the Department of Primary Care and Public Health, University Medical Centre, Radboud University, Nijmegen** my host was Prof. Chris van Weel, an internationally recognised professor of general practice. He arranged several meetings and discussions with GPs, researchers, policymakers and students, including the Cochrane Centre for Primary Care and its nutrition field represented by Prof. Jaap van Binsbergen and Prof. Koos van der Velden (see Appendix 2). He also supported my visits to the following institutions:

- **University of Wageningen** to meet with Prof. Gert Jan Hiddink, one of the founders of the Heelsum Collaboration
- **Department of Public Health and Primary care, Leiden University** to meet with Prof. Pim Assendelft, Head of the Department and Chair of the Coordinating Committee “Health Check - cardio metabolic module” at the Dutch College of GPs and his research team working in the field of prevention.
- **Dutch College of General Practitioners (NHG) Utrecht** to meet with Dr Ton Drenthen, Director of Department prevention and patient education. We discussed the processes of guideline development and programs that support guideline implementation at practice level. We also discussed the newly introduced “prevention consultation” in general practice and the latest guideline published by the College on cardio-metabolic health checks based on the Prevention Consultation. Dr Drenthen provided me with information about the development, implementation and use of patient education materials to support the work of GPs.
- **Netherlands Institute for Health Services Research (NIVEL)** where I met with program coordinators in field of chronic disease management and epidemiology.
- **General practice visits at Brielle** near Rotterdam and **Lent** near Nijmegen.

After obtaining permission, discussions were audio-recorded and transcribed verbatim (see Appendix 3). Qualitative research methods were used to analyse the data and prepare the report.

## RESULTS

### ROLE OF PRIMARY HEALTH CARE IN DUTCH HEALTH CARE SYSTEM

The Netherlands is a western European country with population of 16.4 million people, 80% of whom are native Dutch [10]. In 2006 a new single compulsory insurance scheme was introduced that opened the market for multiple health insurance companies. The idea behind this market oriented health care was the provision of high quality and cost controlled services. Insurance packages are negotiated between the providers and insurance companies; however, the Government regulates the basic package and quality of the services. Currently four major insurance companies dominate the market. The reform transferred the responsibilities for the provision of health care to the insurers, health providers and patients [10].

This change led to drop in the number of uninsured people from 240,000 (in 2006) to 15,000, but also to a yearly increase of 5 % in the health budget and an increase of 41% in the costs to families [11]. PHC plays an important role in the health care system and is delivered by variety of providers, such as GPs, physiotherapists, pharmacists, psychologists and midwives [10]. The GP acts as a gatekeeper to secondary and tertiary care, but not to first-line care by allied health professionals. Almost all of the population is registered with a GP. Currently there are 8600 registered GPs (with an average 2350 patients in their list) who work in 4500 practices [11]. There are 1800 solo practices, the rest being duo (33%) or group practices (25%) [11, 12]. About a quarter of GPs are female who work on part-time basis. There is a trend in the Dutch general practice for part-time clinical work by both genders. GPs deliver continuous care and are visited on average 4 times a year by their patients [12]. Payment of GPs is a combination of capitation fee and fee-for-service.

**After-hours care** is delivered by special GP posts that operate between 5pm and 8am and weekends. A GP post usually covers a population of 150-200,000 patients and is operated by a team of a GP, practice nurse (PN) and driver. Every GP must deliver 50 (6-8 hrs) shifts a year as part of their registration. In some places a GP post is co-located with a hospital emergency department. A patient who enters the premises and does not have a life-threatening condition is advised to visit the GP post.

**Professional GP organisations:** GPs in the Netherlands have two organisations that deal separately with the scientific part and the work-related part of the profession: Dutch College of GPs (NHG = scientific organisation responsible for development of general practice guidelines and tools for their implementation) and National Association of GPs (LHV = trade union that negotiates with insurance companies and is responsible for continuing professional development (CPD) activities).

### EMERGING FOCUS ON PREVENTION IN GENERAL PRACTICE IN THE NETHERLANDS

Prevention has been on the Netherlands reform agenda for more than three decades; but with no associated platform for action. Following the WHO prevention criteria from 1968 [13], the Dutch College of General Practitioners (NHG) issued a prevention policy in 1992 with the following criteria:

- Conducting prevention only when proven effective and feasible and task of the GP
- Need for improvement of practice organisation
- Outreach visits by practice facilitators (part of regional structures)
- Stepwise implementation [14]

In the recent Prevention policy of the Dutch Ministry of Health (2007-2011), action programs for health professionals, public health organisations, municipalities, and health insurance companies were introduced. They focused on the following risk factors: diabetes, smoking, overweight, depression and alcohol consumption [14].

**General practice was chosen for prevention because:**

- GPs know their patients, including their medical history
- Prevention is part of the GP's tasks description
- There are national evidence-based practice guidelines (currently 99 published)
- General practice characteristics: 95% are computerised; have practice assistant and PN
- Regional structure for CPD and implementation of guideline recommendations

**Role of insurance companies in prevention**

The role of insurance companies in prevention is not yet well defined. They are positioned well in the health care system and certainly have power, but their role can be described as passive. They have their own agenda and are interested in investing in the delivery of quality of care and development of care plans for different diseases, rather than investing in prevention. Because of the need for financial incentives to support preventive activities this passive approach affects both providers and patients.

**Table 1: Quotes illustrating the theme “Role of insurance companies in prevention”**

Theme	Quote
Passive role in health care	<i>Position of insurance companies is intriguing. ...Despite their power, insurance companies play a passive role in health care system. (Interview 20)</i>  <i>There are currently four big companies which control the market. (Interview 26)</i>
Lack of transparency and no interest in prevention	<i>Health insurance companies' policies are not very transparent. They have different priorities and prevention is not one of those. The companies are interested in quality of care and care plans. ....Insurance companies are reluctant about prevention, because it will increase their costs. They are saying: "You are bringing a whole bunch of new people who don't have disease and we have to pay for it". (Interview 7)</i>

**Role of the GP in prevention**

In recent years the attitudes of GPs towards prevention have shifted dramatically. In comparison with the last ten years, nowadays GPs think that delivering preventive care is part of their core business. Some still question the need for prevention and its effectiveness, but this could be explained by their medical training having focused more on treatment than on prevention of disease. It was interesting that when talking about prevention the focus was more on secondary and tertiary rather than primary prevention of diseases (Table 2).

Some of the barriers identified by the GPs in the implementation of prevention in the Netherlands included their limited knowledge about prevention; uncertainties about its effectiveness; practice organisational limitations (such as limited risk factor registration; high workload, insufficient assistance from practice team and lack of time) and lack of financial compensation [14]. Some GPs questioned how prevention would impact on the doctor-patient relationship and on their individual approach to patients. Another important factor is the attitude of the GPs who have been trained in treatment rather than prevention of diseases and the fear of medicalisation of patients [14].

A significant barrier to the delivery of prevention is the gap in communication between GPs and public health professionals about the roles in prevention. As an example illustrated in Table 2, GPs do not have access to information about immunisation of children, which makes it difficult to increase the coverage especially of hard to reach groups.

**Table 2: Quotes illustrating the theme “Role of GP in prevention”**

Theme	Quote
GP attitudes to prevention	<p><i>There is a big shift in GP’s thinking about prevention. Years ago they were saying that prevention is not an essential part of their business, but now they see it as core part of their work. (Interview 13)</i></p> <p><i>GPs have limited knowledge about prevention. They have also doubts about its effectiveness. They are trained in cure rather than prevention of diseases. (Interview 27)</i></p> <p><i>GPs have different perceptions about their tasks in providing information to their patients. However they are more focused on secondary and tertiary prevention (90%) rather than primary prevention (60%).(Interview 25)</i></p> <p><i>Everyone thinks that it [prevention] is very beneficial, but there are also complications. (Interview 26)</i></p>
Gap in communication between GPs and public health professionals	<p><i>There is a gap in communication between public health professionals and GPs. For example immunizations - some hard to reach groups are not immunised, but they seek help from their GP for acute problems. If GPs are informed who the people with missing immunisations are, they can be referred to the public health services by the GP. (Interview 24)</i></p>

### **Role of practice nurse in delivering preventive care**

The role of the PN in general practice has been recognised as an important asset in the provision of care to the patients and saving GPs’ time. In the recent years most of the solo and group general practices in the Netherlands have employed one or more PNs, predominantly on part-time basis. The way their skills are utilised differs between practices. The roles they are given include facilitation of health assessments, development of management plans, and health education of patients with chronic disease. Good examples of are cardiovascular risk management (CVRM) and diabetes management. According to the Dutch GPs’ guideline for CVRM, prevention of CVD is an appropriate task to be delegated to PNs, especially patient education and advice and support for lifestyle change [15]. Typical involvement of PNs in chronic disease management such as diabetes, asthma and hypertension includes regular consultations with the patient (at least 3 times a year) and provision of personal lifestyle advice and education. PNs perform their tasks under the supervision of the GP [15]. In addition to supervision of the work of the PN, GPs also prescribe medications and consult once a year with patients with chronic disease.

In the area of prevention of chronic disease the role of PN is not yet clearly defined. According to studies conducted in recent years in the Netherlands, PNs are increasingly delegated the task of cardiovascular risk assessment. An example is the IMPALA study (**IM**proving **P**atient **A**dherence to **L**ifestyle **A**dvice) conducted M. Koelewijn-van Loon as part of her PhD thesis, which comprised nurse-led intervention using cardiovascular risk assessment, risk communication decision support tool and motivational interviewing of patients with risk factors for development of CVD [15]. Despite the two-day training delivered to PNs involved in the study, the author admitted that it was very difficult to change their attitudes.

*“PNs sometimes miscalculate cardiovascular risk and need to be additionally trained especially in the way the risk is calculated and in providing accurate feedback to the patients” (Interview 3).*

A current barrier to using the assistance of PNs in delivering prevention is the lack of payment for their services.

**Table 3: Quotes illustrating the theme “Role of practice nurse in delivering preventive care”**

<b>Theme</b>	<b>Quote</b>
Current role of PN in general practice	<p><i>The way PNs in the Netherlands are used differs between practices (Interview 10)</i></p> <p><i>It is a tendency in general practice, PNs to do more and more in management of chronic diseases. (Interview 8)</i></p> <p><i>When someone changes the way of its life [their way of life] this motivates me [a PN] to do my job even better. (Interview 15)</i></p>
Role of PN in prevention	<p><i>Cardiovascular risk assessment is increasingly delegated to PN. (Interview 3)</i></p> <p><i>PNs and practice assistants need deeper biomedical knowledge to give feedback to the patients [in health checks] (Interview 10)</i></p> <p><i>We want to go back to the role of the nurse – to work close to the doctor. Our goal is to make preventive work of the nurses more efficient. (Interview 35)</i></p>

### **A usual day in a Dutch general practice**

A snapshot of three different Dutch general practices and their preventive activities is provided in the boxes below.

**Practice location:** Elsloo, 17km from Maastricht

**Practice profile:** 3 GPs and 1 PN on part-time basis and 2 practice assistants. Practice is open five days a week from 8.00am till 5.00 pm. Consultation times are from 8 to 10.30am. Only on Tuesday there is a clinic from 1.30 till 5.00pm.

**What I learned:** Practice serves local population, predominantly Dutch people with a few migrant families. I observed 10 consultations conducted by one of the GPs between 2.00 and 5.00pm. Patients had various complaints, predominantly infections or injuries. The age range was 14 to 65 years. Only two patients had lifestyle risk factors and they were given dietary advice by the GP. From the interview with the PN I understood that she comes twice a week and runs diabetes and CVD clinics. She does patient consultations, management, suggests treatment plans (for new patients), and does follow up. According to diabetes management protocol she is responsible for 3 visits a year and the fourth is done by the GP. She applies SDM through motivational interviewing to convince patients to change their lifestyle.

**Practice location:** Brielle, 36 km from Rotterdam

**Practice profile:** 3 GPs, 4 practice assistants and 1 PN, all on part-time basis. The practice is based in the city centre at an old church. The practice was built inside the church and retains the façade. It is open five days a week from 8.00 am till 5.00 pm. Consultation times are from 8am to 10.30am and from 1.30pm till 4.30pm.

**What I learned:** In between and afterwards GPs do home visits, administration, consulting medical specialists, reading incoming post from hospitals, interdisciplinary discussion, gather with colleague GPs and perform CPD activities. GPs do also home visits and shifts at the nearest GP post, which is based in a village 10 km away.

GPs often use patient information letters for different diseases generated from their software system. Patients also can take brochures from the wall in front of the reception area, where patient education materials from the Dutch College are placed. Practice assistants and PN have a very small room to share for their consultations.

**Practice location:** Lent, suburb of Nijmegen (4km from city centre)

**Practice profile:** 4 GPs and 1 GP trainee, 2 PAs, 2 PNs, 1 Practice manager

In the same building there is a physio practice which operates separately, but is co-located with the GP practice. On the other side of the practice there is a home for elderly people.

**What I learned:** Attended consultations conducted by one of the GPs between 8am and 12.30pm. In total 14 patients were seen with a variety of needs, including PAP smears, monitoring of antidepressive therapy, anxiety disorder, asthma, dermatomycosis, eczema, and wound healing.

Examples of primary prevention: young woman with familial hypercholesterolemia for her therapy; old lady (76 years) with hypertension controlled by medication and hypercholesterolemia (no Statins prescribed due to side effect of muscle pain).

Consultations lasted average 15-20 min. Most of the patients had more than one issue to discuss with their GP and they wanted to include it in the visit. The GP was running behind time with the appointments, but to keep the doctor-patient relationship strong he answered patients' queries.

## PATIENT-CENTERED CARE AND USE OF SHARED DECISION-MAKING APPROACH IN PHC

One of the aims of the Dutch government is to strengthen the position of the patient and make the Dutch health care system more patient-centred and demand-driven. The government aims to encourage consumers to choose rationally between health care providers and between health care insurers [16]. Several policy documents were developed during and after the health reform in 2006 which refer to patient rights, obligations and their involvement in decision making process, such as "Health Insurance Act", "Seven rights for the client in health care", "The law on the medical treatment agreement". PHC is seen as the best setting for implementation of patient-centred care due to provider continuity and responsiveness to the individual needs of patients [17]. In recent years patient involvement in setting the national research agenda and in developing of clinical practice guidelines has been increasing [18].

An example of patient input into guideline development in the area of prevention in PHC is the latest guideline on cardio-metabolic health checks published by the Dutch College of General Practitioners in February 2011. The guideline is built on the principles of risk

communication and shared-decision making, and focuses on patient-centred care in the provision of health checks [16].

There are different examples of the delivery of patient-centred care and the use of SDM techniques in Netherland PHC. One is maintaining a strong relationship between the GP and the patient or the PN and the patient through good communication and tailored guideline recommendations towards patient needs (Table 4). For example, PNs use several SDM techniques such as motivational interviewing in offering lifestyle change advice to their patients. GPs provide nutritional advice to their patients by breaking the recommendations into different sessions and monitoring compliance.

However, some of the fears of GPs are that doctor-patient relationships may be endangered when GPs offer screening for chronic disease because of the possibility of causing anxiety or medicalisation in patients, and the lack of proof of long-term effects of prevention (Table 4).

There are also challenges in the provision of patient-centred care and prevention for the hard to reach population or people of low socio-economic status (SES). The social context and the health literacy level of the patient play an important role in the success of preventive care. Patients are encouraged to register family members with the same GP/ practice to enable the GP to have deeper knowledge of their environment, to offer more personalised care and to be proactive. Dutch GPs increasingly must serve the needs of the migrant population, but the majority of doctors are not aware of the cultural values and preferences of migrants.

**Table 4: Quotes illustrating the theme “Patient-centred care”**

<b>Theme</b>	<b>Quote</b>
GP-patient or PN-patient relationship	<i>Nurse-patient relationship is very strong and more informal than the doctor-patient one. (Interview 35)</i> <i>Screening can endanger the doctor-patient relationship. ..The long term effects of the prevention are not proven and there is a possibility for causing an anxiety or medicalisation of the patient. (Interview 10)</i>
Importance of communication with the patient	<i>The doctor-patient communication is crucial [in GP consultations]. (Interview 19)</i> <i>Many of the outcomes of doctor-patient communication that are considered relevant by doctors relate to the impact on patients. (Interview 5)</i> <i>GPs tailor guideline recommendations to their patients' needs. (Interview 24)</i> <i>In one-to-one communication process GPs have to do it [nutritional guidance] in different sessions. (Interview 25)</i>
SES and social context as factors in provision of patient-centred care	<i>Most GPs prefer to deal with educated patients, because it is easy. ..Working with people from low SES can be very difficult because they don't know where to start and where to end. They always come up with questions that are difficult to answer. (Interview 23)</i> <i>Social context of the patient is very important [for success of prevention].(Interview 14)</i>

Another example of the delivery of patient-centred care and SDM in the PHC setting is through use of patient information letters based on clinical guidelines (integrated in the GP's medical records system), decision aids (printed or Web-based) and brochures and pamphlets (hard copies available in the waiting rooms of GP practices). According to the

Dutch College of GPs more than 95% of Dutch GPs use patient information letters in their consultations (Table 5). The uptake of 17 decision aids which are available on the national health care portal [www.kiesbetter.nl](http://www.kiesbetter.nl) [choose better.nl] is unfortunately not very high due to difficulties in their accessibility. Despite the collaboration between patient organisations, guideline developers, GPs and medical specialists, the content of the decision aids is not linked to the clinical practice guidelines and they offer only options and probabilities rather than guidance and coaching [16]. To overcome this problem the developers plan to implement decision aids in clinical guidelines development and to integrate them in doctor-patient communication.

Another fast developing area to support patient-centred care is improvement in GPs' information technology (IT) systems and the development of health websites with easily accessible and understandable information for the general population (Table 5). A current project called Zorgportal [care portal] is being developed at the Department of General Practice, University of Nijmegen and trialled in 15 GP practices in the area. It is a Web-based portal where patients and their family can see their medical records and communicate with the GP via email. This eliminates the need to call the GP in practice hours. The system notifies the GP of a message and the GP replies to the patient at a convenient time. The system is a shared record where GP and specialist can enter information for the patient and the file is connected to the GP's file/system.

**Table 5: Quotes illustrating the theme “Patient educational materials”**

Theme	Quote
Patient information letters based on clinical guidelines	<i>More than 95 % of GPs use patient information letters in their consultations. 80-90 % use such letters in every consultation. Half of the GPs use patient information letters regularly. (Interview 27)</i>
Decision aids	<i>Currently there are 17 decision aids available at a national health portal, but these are not widely used by patients and doctors, because of difficulties in finding them on the website. (Interview 27)</i>  <i>The decision aid [for osteoporosis treatment] will be a website and sample sheet to be used by the physician during the consultation. Lifestyle recommendations will be included as well. (Interview 6)</i>
Web-based information for patients	<i>New website for general public was developed [by the Dutch College of GPs] and is ready to be launched [by the end of the year] (Interview 27)</i>  <i>We are developing a Web-based application where the patient can see his information. The patient can choose one doctor to be central for the care of the patient. The GP and the specialist can put information about the patient in the system. .... This is patient-centred support system. It will be automatically linked to the patient record in the GP system, which is the leading one. Specialist can't read GP's patient file. He/she can read only the Web-based patient system. (Interview 32)</i>

## PREVENTIVE CONSULTATION INITIATIVE AND ITS IMPLEMENTATION

Preventive Consultation is an initiative that started 4 years ago as a joint effort between the Dutch College of GPs, the National Association of GPs, Heart Foundation, Kidney

Foundation and Diabetes Federation. The idea was to address the epidemic of lifestyle-related diseases, especially those with overlapping risk factors, and to reduce self-testing (e.g. cholesterol test, kidney check, diabetes risk test) by consumers. As an implication of self-testing trend, GPs had to consult patients after self-tests and to deal with their queries [19]. They also wanted to play a role in prevention and not be left out. However, some GPs felt that they needed more guidance and a practical tool to be able to offer significant and effective preventive check-ups.

The existing prevention activities in the Netherlands included programs for cervical cancer screening, influenza vaccination, hereditary hypercholesterolemia, aftercare for breast cancer screening and disease related prevention of COPD, asthma, diabetes and cardiovascular disease (CVD). These were delivered by GPs, PNs and involvement of health centres. The role of the GP in prevention was considered extremely important due to the strong doctor-patient relationship, regular contacts with the patient, and access to hard to reach population groups.

The design of the “Preventive Consultation” included adaptation of existing GP practice guidelines, use of validated questionnaires and tests, and modular structure (including for cardio-metabolic disorders, cancer and mental illness) [14]. The module for cardio-metabolic risk focuses on prevention of CVD, diabetes mellitus and chronic kidney disease, actively offers of risk estimation, follows up with therapy and advice in the primary care setting. The target group includes people with no diagnosis of hypertension, diabetes mellitus, CVD, kidney disease or hypercholesterolemia. Preventive consultation includes an initial questionnaire completed by the target patient group and two consultations conducted by GP and PN [19].

The initiative was piloted in 16 GP practices in three different regions in the Netherlands in 2009, with half of the practices offering active invitation (personal letter and reminder) and the other half passive invitation (poster and brochure in waiting room and announcement on website). The first consultation was conducted either by a GP or PN and the second was done mainly by GPs. The results showed that active invitation led to 33% participation; 2/3 of questionnaires showed increased risk based mainly on age, and over 1/3 of people with increased risk visited their GP

Preventive consultation was officially launched at the national GP congress in November 2010 and was followed by guidelines for cardio-metabolic health checks published by the Dutch College of General Practitioners in February 2011. This was supported by educational materials to facilitate implementation of the guidelines in general practices and patient information materials. The launch for the general public was supported by a media campaign and website in April 2011. The initiative has been implemented slowly due to an unresolved issue of payment for health checks by insurance companies, leading to lack of enthusiasm amongst GPs.

**Table 6: Quotes illustrating the theme “Preventive consultation initiative and its implementation”**

Theme	Quote
Predisposing factors for preventive consultation	<p><i>Increased prevalence of CVD and overlapping risk factors such as overweight, smoking, hypertension, high cholesterol levels and increased blood glucose levels determined the need for action by implementing population based prevention strategies to prevent future problems for patients and to reduce health costs. (Interview 29)</i></p> <p><i>10 years ago it was impossible to come to the idea of prevention in PHC setting due to insufficient resources. (Interview 29)</i></p>
Prevention consultation as an	<i>Prevention consultation is an example for collaboration of</i>

instrument for improved communication between GPs and public health professionals	<i>GPs and public health in prevention. It can be a good instrument to bridge the gap between public health and GP. (Interview 27)</i>
Preventive health checks	<i>When you do a new program/intervention (e.g. health checks), you have to make sure that you have something to offer to all participating patients (not only high risk ones, but to the patients at low to medium risk). (Interview 10)</i>
Barrier to implementation of preventive consultation	<i>Population screening is not individual care and insurance companies won't pay it. That's why there is no reimbursement [for prevention health checks] in place yet. (Interview 29)</i>

## EFFECTIVE STRATEGIES FOR GUIDELINE IMPLEMENTATION

Development and publication of guidelines for GPs is the responsibility of a single organisation, the Dutch College of General Practitioners (NHG) <http://nhg.artsennet.nl/English.htm>. Multidisciplinary guidelines are developed and published by a separate organisation. Currently there are 99 clinical guidelines for different diseases and conditions. Of these only 11 address prevention, and their focus is predominantly on cancer and infectious diseases. Until recently there were only three guidelines in the area of chronic diseases (on problematic alcohol consumption, cardiovascular risk management (CVRM) and obesity) [14]. In 2011 a new guideline on preventive consultation, module cardio-metabolic risk, was published by NHG, replacing the CVRM guideline (see above on Prevention Consultation). A significant proportion of clinical guidelines (70%) are followed by Dutch GPs. One of the reasons is that as part of their accreditation, practices are checked to see whether they have implemented NHG guidelines [11]. Accreditation of GPs serves a strong motivator for following guideline recommendations.

Implementation of the guidelines in PHC is delegated to the National Association of GPs (LHV) responsible for continuing professional development CPD activities. LHV uses its regional structures to promote and disseminate guideline recommendations by including them in different CPD training programs (Table 7).

**Table 7: Quotes illustrating the theme “Successful strategies for guideline implementation”**

<b>Theme</b>	<b>Quote</b>
Guideline implementation strategies	<i>Ownership is step number one in implementation [of guidelines]. (Interview 26)</i> <i>CPD activities can help implementation when guideline recommendations are included in training programs for CPD. (Interview 26)</i> <i>Part of accreditation process – the practice has to prove the implementation of NHG guidelines. (Interview 26)</i>
Guideline characteristics	<i>Guidelines should be goal-specific and content oriented! (Interview 5)</i>

# HEELSUM COLLABORATION AS AN EXAMPLE OF DELIVERING PREVENTIVE CARE IN THE FIELD OF NUTRITION

The Heelsum Collaboration on General Practice Nutrition is a multidisciplinary network including experts in primary care prevention from Europe, North America and Australia [20]. The collaboration developed from an international workshop on the nutritional attitudes and practices of GPs, and began in 1995 in the town of Heelsum in the Netherlands. Since then six international workshops have been held in the same location and different topics in the nutrition field have been discussed. The aims of the Heelsum Collaboration are to promote research and expertise, to facilitate exchange of experience and to develop models of success in nutrition communication in PHC.

One of the reasons for the success of the Heelsum Collaboration is the unique position of the GP in the Netherlands and the exchange of expertise in the field of nutrition communication with international experts in the field. *“We learned a lot what GPs in different countries do in the field of nutrition communication [through Heelsum Collaboration meetings]”. (Interview 24)*

Some of the characteristics of the Dutch GPs’ context that facilitate the process of nutritional guidance in PHC are: the central position in the health system, continuity of care, high perceived expertise in nutrition, high referral score, high level of trust of the patients and reach to nearly all segments of the population. Motivation and self-effectiveness of the GP also facilitate prevention in the field of nutrition (Table 7). There are, however, some barriers to nutrition education and communication, such as patient characteristics or readiness for change (Table 7). One of the conclusions made at the Heelsum Collaboration meetings is that nutrition should be tailored to patients’ individual circumstances and personal preferences and patients should be empowered to take care of their own health.

**Table 7: Quotes illustrating the theme “Barriers and enablers in nutrition communication in the Netherlands”**

Theme	Quote
GP attitudes to nutrition communication	<i>GP’s motivation and self-efficacy to provide nutrition guidance plays an enormous role on the effect of the advice given to their patients. (Interview 24)</i>
Enablers to nutrition communication	<i>Some examples of enablers for positive nutrition practices are: interest of the GPs in the effect of nutrition on health and disease; self-efficacy in their ability to give dietary advice in the prevention and treatment of coronary heart disease; positive perception about role of behaviour and heredity in health. (Interview 25)</i>
Barriers to nutrition communication	<i>GP can put a lot of effort to empower patients in nutrition communication, but when the patient is not receptive, things can go in completely wrong way. (Interview 25)</i>  <i>GPs and patients have completely different perceptions of what other party thinks, expects and does. They speak different languages. Empowering interaction between the GP and the patient in nutrition communication is very crucial. (Interview 25)</i>

# CURRENT INITIATIVES FOR INNOVATION, COLLABORATION AND INTEGRATION IN PHC SETTING

With the modernisation of society, general practice is facing shifting expectations with regard to access and service availability. Due to the shift of health care from secondary to PHC, GPs have to perform more tasks, to delegate responsibilities to PNs or practice assistants or to cooperate with other health care providers [21]. Some examples of recent initiatives in Dutch PHC are described below.

**Koplopers [Front runners] initiative** aims at identifying “front runners” GP practices and to connect them with researchers at the Department of Primary Care and Community Health, Radboud University, Nijmegen. Front runners are GP practices which can provide an example of best practice/ innovations, but are not currently involved in research. The role of the researchers of the Department is to help them to implement innovation and to present it. The main idea is stimulation and encouragement of initiatives originating from GP practices, i.e. a bottom-up approach (Table 8).

**Academic Collaborative Centre Public Health** in Nijmegen has been established between municipal public health departments and the Radboud University with the aim of improving knowledge transfer between researchers, practitioners, policymakers and the education sector. A recent initiative is a Consortium Integrated Approach Overweight (CIAO) which aims at providing a coherent integrated multi-sectorial approach towards obesity prevention. The pillars of CIAO are political commitment, social marketing, public-private partnership, connection between cure and prevention, and a strong scientific base [22].

**Eindhoven health centre** encompasses 10 GP practices with 60,000 patients in the area and is part of the network of GP academic practices. This organisation is an example of an integrated PHC centre with an innovation team of about 10 people (GP, PN, patient, psychologist etc.) The innovation areas include cardiovascular risk management, diabetes and depression. These are predetermined by insurance companies, which are interested in quality of care and care plans rather than prevention (Table 8).

**Table 8: Quotes illustrating the theme “Innovation and collaboration in PHC”**

Theme	Quote
Koplopers initiative	<p><i>Koplopers initiative tries to match the expertise of Department researchers with front runners’ general practices and to help innovations.</i></p> <p><i>.....The main idea behind the initiative is to connect people and to facilitate innovation in primary care. Innovation areas include: 1) bringing practices out of isolation; 2) moving from a curative to a preventive approach; 3) patient centred care. (Interview 17)</i></p> <p><i>New task to leave the ivory tower of academics and to listen what happens at the practice..... To help dissemination of best practice examples. (Interview 34)</i></p> <p><i>By linking the Department [of Primary Care and Community Health, Radboud University, Nijmegen] to the GP practices in the region we would like to make the innovation collaborative rather than top-down. (Interview 17)</i></p>
Innovation at Eindhoven health centre	<p><i>Innovation areas [of Eindhoven health centre] are CVRM, diabetes, depression etc. These are predetermined by the insurance companies.</i></p> <p><i>.....Insurance companies are reluctant about prevention, because it will increase their costs. They are saying: “You are bringing a whole bunch of new people who don’t have disease and we have to pay for it”.</i></p> <p><i>...Health care organisations (centres) have a weak position in negotiating with</i></p>

<i>the insurance companies [about research and innovation areas]. This is because patients choose the insurer and the centre should work with it. (Interview 7)</i>
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**THERMION project** is an example of integration of PHC services and collaboration with some secondary care providers. It will integrate GPs, allied health professionals, social services and some hospital department services under one roof.

*“The aim of THERMION is to ensure efficiency of care provision and to address future shortage of health specialists.” (Interview 22)*

*“By moving to THERMION we [Aged care organisation] are hoping to stay close to the doctors. We also want to stay close to physiotherapist, psychologist and pharmacist who can refer patients to our services. We want to be visible to keep our market share and to expand our services.” (Interview 35)*

**Brielle Medical Centre** is a local initiative aiming to provide coordinated care between GPs, PNs, allied health professionals, public health services and some hospital care departments. A new building is currently being constructed to accommodate under one roof the abovementioned services plus pharmacy, pathology and after-hours care provided by a GP post. This will be a good example of coordination, particularly across different services and sectors, in meeting the health needs of the local population.

## DISCUSSION

This section discusses the key findings from the Travel Fellowship from several perspectives. It summarises the lessons learned from discussions and observations in Dutch general practices, and identifies areas for further development and research. It also draws conclusions applicable for prevention, SDM and guideline development and implementation in the Australian context.

The aim of the Travelling Fellowship project was to identify what Australia might learn from the Netherlands' experience in the area of preventive care and in particular strategies for increasing the use of preventive activities in PHC; and to develop approaches applicable to the Australian policy and practice environment in implementation of preventive guidelines and SDM. Opportunities for further collaboration with international researchers were also sought. My overall responses to the abovementioned aims are as follows:

- As in Australia, there is an emerging focus on prevention in Netherlands general practice. In the recent Prevention policy of the Dutch Ministry of Health, action programs were introduced for health professionals, public health organisations, municipalities, and health insurance companies to tackle lifestyle risk factors for chronic diseases.
- The place of PHC and the role of the GPs as gatekeepers are highly valued in the Netherlands. With compulsory registration, almost all members of the population have their own GP, whom they visit on average 4 times a year, leading to a strong doctor-patient relationship and provider continuity. This serves as a good basis for implementing prevention in the general practice setting.
- The role of PNs is recognised as an important asset in the provision of various aspects of care to patients, such as chronic disease management and prevention.
- Good adherence to general practice guidelines is ensured by having a single institution responsible for their development, publication and updating. Implementation is facilitated by a separate organisation through its regional structures.
- Currently there is a strong focus on the provision of patient-centred care and the use of SDM by PHC providers.
- Integration of services, innovation and collaboration in PHC settings is emerging at local and regional level, to better serve the needs of the local population.

## KEY FINDINGS AND RECOMMENDATIONS

### ***Delivery of preventive care in primary care***

The Dutch approach to prevention in general practice highlighted two issues which are also significant in Australia. One is that prevention has been on the Netherlands reform agenda for more than three decades, but with no common platform for action until recently. There have been various barriers for GPs in the implementation of prevention, such as limited knowledge about prevention, uncertainty about its effectiveness, danger of medicalisation of patients (because GPs invite healthy people for a consultation), practice organisational limitations, and lack of financial compensation [14]. Australian GPs are face similar barriers that make the issue identical in both countries [23].

In recent years the attitudes of Dutch GPs towards prevention have shifted dramatically. Nowadays GPs consider the delivery of preventive care as part of their core business. Some still question the need for prevention, and its effectiveness, but this can be explained by their medical training being focused more on treatment than on prevention of disease. GPs have

been assigned a new task of delivery of population-based programs, which overlaps with the task of the public health services. There is still a gap in communication between the GPs and public health professionals about their roles in prevention. There is a concern among some GPs about how prevention will affect the doctor-patient relationship and the individual approach to the patient. What ethical considerations will GPs use to justify their ethical considerations for public versus individual good?

An interesting fact is that when talking about prevention the focus is more on secondary and tertiary rather than primary prevention of diseases.

The second issue is that the role of the PN in Dutch general practice has been recognised as an important asset in the provision of care to patients and in saving GP time. PNs are well utilised, especially in the management of chronic diseases by provision of personal lifestyle advice and patient education. Recently they have been delegated the preventive task of cardiovascular risk assessment. However, the way their skills are utilised differs between practices. In contrast, Australia is lagging in using PN resources. PNs lack a recognised career pathway in general practice, and the system undermines their professional responsibility and accountability [24]. PNs are seen more as a help to GPs, working under their supervision. With the newly proposed Australian Government “Practice Nurse Incentive Program” [25] there might be more opportunities for Australian general practices to employ PNs and to use their potential in the prevention and management of chronic diseases, similarly to their Dutch colleagues.

The Dutch experience in utilising the skills of practice assistants (equivalent to Australian practice receptionists) in performing basic health assessments, could also be applicable in the Australian context.

#### **Recommendations:**

1. Effective delivery of prevention of chronic diseases in primary care can be ensured by strong provider continuity combined with good collaboration and utilisation of practice staff skills.
2. The gap in communication between the GPs and public health professionals should be bridged to ensure better delivery of preventive care to the population.

#### ***Patient-centred care and use of SDM approach in primary care***

Strengthening the position of the patient is currently on the policy agenda in both Netherlands and Australia. Several examples from the Netherlands could be applicable to the Australian context. One is that Dutch patients are encouraged to register family members with the same GP/practice, enabling the GP to have deeper knowledge of their environment, to offer more personalised care and to be proactive. Also doctor-patient communication in GP consultations is facilitated by the use of patient information letters based on evidence-based clinical guidelines, which are used by more than 95% of Dutch GPs. In Australia, although the health care system lacks compulsory registration, patient-centred care can be ensured by encouragement of provider continuity. There could also be an emphasis on patient involvement in setting the national research agenda and in developing clinical practice guidelines.

PNs use several SDM approaches in their contacts with patients, such as motivational interviewing and patient decision aids. Improvement in GPs’ information technology systems and the development of health websites with easily accessible and understandable information for the general population are current fast developing areas to support patient-centred care.

One of the Dutch challenges in provision of patient-centred care and prevention is dealing with hard-to-reach migrant population. GPs must increasingly serve the needs of this population group, but the majority of doctors are not aware of the cultural values and preferences of migrants. Some unanswered questions are: How to overcome misunderstandings in the delivery of good care and prevention for migrant population? How

to ensure cultural competency of the health providers? How to improve patients' health literacy levels? The same questions need to be dealt with by Australian GPs in the context of multicultural Australia.

**Recommendations:**

1. Evidence-based decision support tools and improved information technology in GP practices should be developed, trialled and supported in Australia to improve the capacity of the government to identify effective programs for investment in delivery of effective preventive activities in PHC.
2. Policymakers should resource and support the development and implementation of programs for cultural competency of medical students and GP trainees, to facilitate better care for hard-to-reach groups.

***Implementation of and adherence to clinical guidelines in PHC***

Netherlands is an example of very good adherence to clinical guidelines by GPs. Seventy percent of GPs follow guideline recommendations and half of the GPs regularly use patient information letters (based on the clinical guidelines) to facilitate better communication with their patients. There are several key factors for this success.

Firstly, the Dutch College of General Practitioners is the single organisation responsible for the development, publication and updating of clinical guidelines for GPs. Secondly, a separate organisation (the National Association of GPs) has the responsibility for their implementation through its regional structures and inclusion of recommendations in the training programs for continuing professional development activities. Thirdly, accreditation of GP practices serves as very strong motivator for following guideline recommendations, as the implementation of guidelines published by the Dutch College of GPs is one of the assessment criteria. These key factors should be taken into account by Australian policymakers and guideline developers when implementing preventive guidelines in PHC.

The recently launched Dutch initiative, "Preventive consultation", encompassing adaptation of existing GP clinical guidelines, use of validated questionnaires and tests, and a modular structure for cardio-metabolic health checks, is an illustration of slow development (more than four years from inception to official launch) and implementation, due to lack of financial incentives for preventive services.

From the development and piloting of preventive consultation, some lessons learned and unanswered questions with possible implications for Australian policy context are:

- Who should do the selection of the target population? Who should do the health checks at population level? Are GPs or public health professionals responsible for these? What are GPs' perceptions of their role in this population-based program? How would the doctor-patient relationship be affected? What ethical considerations should prevention consultation raise?
- How would financing of the initiative be organised? Will prevention consultations be reimbursed? Are they cost effective? Is there sufficient evidence of positive effects?
- How can vulnerable groups be reached? Would a community oriented approach be used? Who would do what in the follow-up stage? Would the Internet based decision aids be a useful resource?

**Recommendations:**

1. Adherence to general practice preventive guidelines can be improved by having a single national organisation which develops the guidelines, and strong regional structures responsible for their implementation.

2. Guideline developers should consider inclusion of decision aids in clinical guidelines and their integration into doctor-patient communication.

### **Innovation, collaboration and integration in the PHC setting**

Innovations in Dutch PHC are encouraged through initiatives such as the Nijmegen Koplopers project (front runners) where best performing GP practices are connected with researchers, and collaboration and dissemination of best practice examples are facilitated. Academic collaborative centres have also been established in different parts of the Netherlands, with the aim of improving knowledge transfer between researchers, practitioners, policymakers and the education sector. These two initiatives can be good exemplars for Australia in improving knowledge transfer between researchers, practitioners, policymakers and the education sector.

There are several initiatives towards integration of PHC services and collaboration with some secondary care providers, such as the THERMION project and Brielle Medical Centre. Integration of primary and secondary health care services occurs at local level, with the aim of delivering better coordination of care to serve the needs of the local population. This can be compared with Medicare Locals in Australia which have a similar aim to ensure that the population in a particular geographical area receives the care that is needed. Dutch initiatives, as in Australia, are still in a developmental stage and no evaluations are available about their effectiveness.

### **Recommendations:**

1. Integration of services, innovation and collaboration in PHC settings should be well resourced and supported at local and regional level to better meet the health needs of the local population.

## **CONCLUSION**

Conversations with researchers, GPs, policymakers and academics resulted in a number of lessons and generated excellent ideas for future collaboration.

There were many similarities and some differences between the Netherlands and Australia in the way prevention is perceived and delivered and the way guidelines are adhered to by GPs. These stimulated further thinking and reflection on what could be applicable to the Australian policy and practice context. This generated a number of recommendations for consideration by Australian policymakers.

The international collaboration developed during the Travel Fellowship could support both Netherlands and Australian researchers, practitioners and policymakers in identifying, developing and implementing evidence-based programs to improve the delivery of prevention in PHC.

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## Appendix 1: Visit schedule Dr Yordanka Krastev

Week start	Monday	Tuesday	Wednesday	Thursday	Friday
10 <sup>th</sup> October 2011	Preparation for the travel to Maastricht	Arrival at Department of General Practice, CAPHRI, Maastricht University	<p>9.00 - 10.00 Prof. Dr Trudy van der Weijden - Introduction</p> <p>10.00 -11.00 Dr Huibert Tange, Expert in Self-management and goal setting in COPD patients</p> <p>11.00 -12.00 Janaica Grispen, thesis candidate. Project "Decision aid for self-tests"</p> <p>14.30 -16.00 Dr Ciska Hoving, Health promotion expert. Interested in SDM.</p> <p>16.30 – Visit GP post in Maastricht UMC</p>	<p>10.00 - 11.30 Dr Marije Koelewijn – Post Doc, Study on involving patients in cardiovascular risk management in PHC.</p> <p>13.30 - 14.30 Dr Anemieke Wagemans, medical specialist, thesis candidate. Project on SDM in intellectual disability care.</p> <p>15.00 - 16.00 Dr Wemke Veldhuijzen, GP. Expert in GP-patient communication.</p> <p>16.00 - 17.30 Dr Mickael Hiligsmann. Post Doc - Developing a decision aid for osteoporosis treatment.</p>	<p>09.00 - 10.00 dr Mark Spigt. Expert in research in innovations of care in chronic disease management.</p> <p>10.00 – 11.00 Anneke van Dijk, thesis candidate. Implementation of self management in DM</p> <p>11.00 – 12.00 dr Tineke van Geel, Expert in decision trees for osteoporosis</p> <p>13.00 - 14.00 Weekly informal meeting with department's senior staff</p> <p>14.30-17.00 Meeting with Marije Koelewijn</p>
17 <sup>th</sup> October 2011	<p>10.00 - 11.00 Dr Merijn Godefrooij, thesis candidate and GP trainee. Implementation of cardiovascular risk management</p> <p>12.00 – 13.00 Lunch</p>	<p>9.00 – 10.00 Writing up notes from discussions</p> <p>10.00 - 10.30 Dr Gaby Ronda. Expert in public health and primary care implementation</p>	<p>9.00 – 11.15 Writing up notes from discussions</p> <p>11.30 - 20.00 Attendance at Informal Department day</p>	<p>9.00 – 12.00 Preparation for presentation</p> <p>13.00 - 14.00 Presentation by Yordanka for the department</p> <p>14.00 – 15.30 Follow-up meeting with Huiebert</p>	<p>9.00 – 10.00 Meeting with Prof. Geert-Jan Dinnant, program leader on daily clinical practice of GPs</p> <p>10.15- 12.00 Meeting with Merijn Godefrooij – plan for joint publication and collaboration in joint funding proposal</p>

Week start	Monday	Tuesday	Wednesday	Thursday	Friday
	<p>time meeting with Department staff</p> <p>14.00 - 15.00 Mandy Stijnen, thesis candidate. Screening the frail elderly in primary care.</p> <p>15.00 - 16.00 Dr Daniel Kotz. Expert in smoking cessation in primary care.</p> <p>16.00-17.00 Choosing articles for the Journal Club with Marije Koelewijn</p>	<p>research.</p> <p>10.30 - 11.30 Dr Marjan van den Akker. Expert in multi mobility and poly pharmacy research.</p> <p>12.30 - 18.30 Dr Loes van Bokhoven, GP, expert in medically unexplained complaints research.</p> <p>Practice visit at Elsloo. Interview PN at Elsloo GP practice.</p>		<p>Tange</p> <p>15.30 – 17.45 Meeting with Trudy and Marije – plans for the future</p> <p>18.00 – 21.00 Journal Club meeting</p>	<p>13.30 - 14.30 Planning for joint publication with Marije and Trudy</p> <p>15.00 –16.00 Final remarks</p>
24 <sup>th</sup> October 2011	<p>9.00 - 12.00 General discussion with Prof. Chris van Weel and introduction to the Department staff</p> <p>14.00-15.30 – Dr. Jan Lavrijsen, general nurse home specialist and expert in SDM in patients in a vegetative state of their life</p>	<p>10.00 - 11.00 Dr Henk Mokkink, expert in guidelines development, GP performance and quality of prescribing practices</p> <p>12.30 - 14.00 Meeting with Prof. Koos van der Velden, professor of public health, leader of the research stream at the Department</p>	<p>12.00-13.40 Chris van Weel, Head of the Department of Public Care and Community Health</p> <p>14.00 - 16.00 Dr Erwin Klein Woolthuis, PhD candidate on screening of diabetes in general practice</p>	<p>10.00 - 11.00 Dr Marianne Dees, PhD candidate on euthanasia issues</p> <p>11.30 - 12.30 Ms Sietske Grol, manager of THERMION project</p> <p>13.00-14.00 Meeting with Prof. Jaap van Binsbergen</p>	<p>13.00- 14.00 Dr Erik Teunissen, PhD candidate on PHC services for migrant population</p> <p>15.00 -16.00 Dr Kees van Boven</p>

Week start	Monday	Tuesday	Wednesday	Thursday	Friday
31 <sup>st</sup> October 2011	<p>Travel to University of Wageningen</p> <p>Meeting with Prof. Geert-Jan Hiddink and Prof. Jaap van Binsbergen</p> <p>Travel to Brielle</p>	<p>Visit GP practice of Meeting with Prof. Jan Jaap van Binsbergen and Dr Kees in't Veld</p> <p>Site visit of the new building of Medical Centre Brielle</p>	<p>Travel to Utrecht</p> <p>Meeting with Dr Ton Drenthen at Dutch College of GPs</p>	<p>10.00 - 11.00 Natalie Donders, PhD candidate on communication of occupational physicians and GPs</p> <p>12.00-13.15 Gerard Molleman, manager health promotion unit in Nijmegen municipality</p> <p>14.00-15.30 Presentation at the Department of Primary Care and Community Health, Radboud University</p>	<p>Travel to University of Leiden</p> <p>10.00-17.00 Attendance and presentation at seminar facilitated by Prof. Pim Assendelft - topic "Prevention Consultation" and projects related to it</p>
31 <sup>st</sup> October 2011	<p>Travel to Utrecht</p> <p>Visit at NIVEL – Meeting with Dr John Paget and Ms Daphne Jansen</p>	<p>10.00-11.00 Dr Carel Bakx, GP, research in obesity and CVD prevention</p> <p>11.00 - 12.00 Dr Mark van der Wel, hypertension and CVRM</p> <p>12.10 - 13.30 Willemijn van Erp, PhD candidate on ethical topics/end-of life decisions</p>	<p>Travel to Lent</p> <p>Observation of consultations of Dr Floris van de Laar</p> <p>Visit and observations of consultations at youth wellbeing centre</p>	<p>10.30 - 11.30 Dr Tjard Schermer, program leader chronic diseases (COPD)</p> <p>13.00 - 17.30 Visit at ZZG group (Aged care organisations)</p> <p>Meeting with Mr. Ton van Eldonk, Director of ZZG</p>	<p>Department of Primary Care and Community Health, UMC Radboud University, Nijmegen - final remarks</p>

## Appendix 2: List of key informants and institutions

Key informant	Role and Organisation
Prof. Dr. Trudy van der Weijden	Professor, Implementation of Clinical Practice Guidelines, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Huibert Tange	Associate Professor, Clinical information specialist, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University
Dr Marije Koelewijn – van Loon	Research Fellow, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Ciska Hoving	Assistant Professor, School of Public Health and Primary Care (CAPHRI), Department of Health education and Health promotion, Maastricht University <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Anemieke Wagemans	Specialist in Intellectual disability and PhD student, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Ms Janaica Grispen	PhD student, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Wemke Veldhuijzen	Assistant Professor, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Mickael Hiligsmann	Post Doctoral Researcher, University of Liege, Belgium and School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University
Anneke van Dijk	PhD student, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Mark Spigt	Assistant Professor, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Tineke van Geel	PhD student, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Merijn Godefrooij	GP-trainee/PhD student, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Mandy Stijnen	PhD student, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Daniel Kotz	Epidemiologist & Assistant Professor, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Gaby Ronda	School of Public Health and Primary Care (CAPHRI), Department

Key informant	Role and Organisation
	General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Marjan van den Akker	Assistant Professor, School of Public Health and Primary Care (CAPHRI), School for Mental Health and Neuroscience: MHeNS; Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Dr Loes van Bokhoven	General practitioner in Elsloo and Lecturer at School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Myriam Nysten	Practice nurse in general practice in Elsloo, near Maastricht
Prof. Geert-Jan Dinant	Professor of General Practice, School of Public Health and Primary Care (CAPHRI), Department General Practice, Maastricht University, <a href="http://www.maastrichtuniversity.nl">www.maastrichtuniversity.nl</a>
Prof. Chris van Weel	Professor of General Practice, Immediate Past President of Wonca, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr. Jan Lavrijsen,	Associate Professor, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Henk Mokkink	Epidemiologist, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Prof. Koos van der Velden	Professor of Public Health, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Erwin Klein Woolthuis,	General practitioner and PhD candidate, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Marianne Dees	General practitioner and PhD candidate, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Ms Sietske Grol,	Manager, THERMION project, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Prof. Jaap van Binsbergen	General practitioner in Breele and Co-coordinator of Cochrane Centre for Primary Care”, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Erik Teunissen	General practitioner and PhD candidate, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Prof. Geert-Jan Hiddink	Professor in Human nutrition, Wageningen University, <a href="http://www.wageningenuniversity.nl">www.wageningenuniversity.nl</a>
Dr Kees in't Veld	General practitioner in Breele and Dutch College of General Practitioners, <a href="http://www.nhg.org">www.nhg.org</a>
Dr Ton Drenthen	Team leader, Department of Prevention and patient education, Dutch College of General Practitioners, <a href="http://www.nhg.org">www.nhg.org</a>

<b>Key informant</b>	<b>Role and Organisation</b>
Natalie Donders	PhD candidate, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Gerard Molleman	Manager, Gezondheidsbevordering en Epidemiologie, GGD Regio Nijmegen, <a href="http://www.ggd-nijmegen.nl">www.ggd-nijmegen.nl</a>
Prof. Pim Assendelft	Professor of General practice, Head of the Department Public Health and Primary care, Leiden University and Chair of the Coordinating Committee "Health Check- cardio metabolic module" at the Dutch College of GPs, <a href="http://www.leiden.edu">www.leiden.edu</a>
Dr John Paget	Senior Researcher, Netherlands Institute for Health Services Research (NIVEL); <a href="http://www.nivel.eu/">http://www.nivel.eu/</a> ; Adviser to WHO/Europe for the surveillance and epidemiology of influenza in Europe ( <a href="http://www.euroflu.org">http://www.euroflu.org</a> )
Daphne Jansen	Researcher, Netherlands Institute for Health Services Research (NIVEL); <a href="http://www.nivel.eu/">http://www.nivel.eu/</a>
Dr Carel Bakx	General practitioner and Researcher at Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Mark van der Wel	General practitioner and PhD candidate, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Ms Willemijn van Erp	PhD candidate, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Floris van de Laar	General practitioner in Lent and Coordinator of Cochrane Centre Primary Care, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Dr Tjard Schermer	Program Leader, Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, <a href="http://www.ru.nl/english">www.ru.nl/english</a>
Mr. Ton van Eldonk	Director of ZZG (Home care organization) <a href="http://www.zzgorggroep.nl">www.zzgorggroep.nl</a>

## **Appendix 3: Issues discussed during the meetings**

### ***Role of PHC in the Netherlands health system***

- What role do GPs play in delivery of health care to the population?
- What is the role of the PN in primary care?
- Is there any involvement of other staff members in the care of the population?

### ***Shared decision-making in PHC***

- Is patient-centred care on the health policy agenda?
- Decision aids for patients to prepare them to make decisions with their GP
- Educational materials
- Other tools and resources

### ***Implementation of preventive guidelines in PHC***

- What are the factors affecting the implementation of evidence-based guidelines in PHC in the Netherlands?
- Are there specific resources or interventions available to facilitate implementation of guidelines?
- What factors make an intervention work or fail?

### ***Policies supporting guidelines development and implementation***

- What policies and programs are currently in place to support implementation of evidence-based guidelines in PHC?
- What new initiatives are under discussion?
- What role do professional and health service organisations play in supporting this?
- Is there consumer involvement in this process?