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## Stimulating prevention of gynaecological cancer in Peru



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# Stimulating prevention of gynaecological cancer in Peru

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## Management summary

In the Netherlands breast cancer and cervical cancer are getting a lot of attention. Different prevention facilities and services are available for all women at risk. For example a national screening programme, information and special polyclinics in hospitals. In Peru breast and especially cervical cancer are also a problem. However only few prevention activities are common there. Hospital EsSalud in Cusco, Peru, treats a lot of women with a gynaecological cancer, but they do not have any prevention services. This is not improving the situation for women to survive this kind of diseases.

With this research the situation and obstacles in Peru around the prevention of breast and cervical cancer and the Dutch development of prevention is analyzed. This to see whether it is possible to use insights of the Dutch situation to stimulate the Peruvian situation, focused on Cusco. But different countries means different cultures. These cultures, focused on gender, attitudes and beliefs were also kept in mind when giving recommendations. To find out at which point both countries are, the barrier model is used.

Conclusion of the situation in Peru is that they are stuck at the last barrier of the barrier model in the case of prevention; from the decision making agenda to the implementation agenda. Some prevention activities are there but most of the time they are not getting of the ground widespread. In Cusco, at the case hospital, they are even a little bit behind. They are around the decision making barrier. They have problems with making a good decision and not knowing what to do to implement a good service. At this time they do not have any prevention activity of their own. One of the main causes of this are the cultural attitudes and beliefs of women which are often related to the differences between men and women. Examples are fear of cancer, feeling ashamed when touched by a male healthcare provider and not getting support of their husbands. Other bottlenecks are related to service delivery like the location of the service, quality of the tests and inappropriate examination locations.

In the Netherlands several prevention facilities are used; a national screening programme, genetic screening, breast self examination, information and in the future vaccination of cervical cancer. In a mamma polyclinic, a special polyclinic in a hospital for breast cancer, women get next to information also treatment. Especially the national screening programme is a success; mortality rates decreased in the past years.

Much health profit can be made when Peru focuses especially on cervical cancer but in Cusco more breast cancer patients than cervical cancer patients come to hospital EsSalud. Because both cancers have the same obstacles in case of the gender differences a recommendation would be that they have to focus on both cancers together as 'gynaecological cancer'. In Peru a national screening programme for both cancers should reduce mortality rates when looking at the success in the Netherlands, but this is not available in Peru. Till than it is possible to locally create a climate where it is easier to successfully implement a large screening programme. First information as a prevention tool should be an important goal. This information service should not only be available for women, but also for their husbands. A second improvement would be to look at the healthcare provider and the location. Women feel embarrassed when being touched by a male healthcare provider. No privacy on an inappropriate examination location is not helping at all.

To implement information and a good examination location in hospital EsSalud, a special polyclinic would be appropriate. In this polyclinic women should get information about both breast and cervical cancer (knowledge / education obstacle). To overcome embarrassment a female nurse or physician, like the mammacare nurse in the Netherlands, should be the first contact for the women. This can help to overcome an aspect of the gender problem. The polyclinic should not only help women who are already

screened (like in the Netherlands), but they should also be a screening facility as well as a treatment service. When already screened women can help with giving information, this can cause a snowball effect, because knowing other screened women is also a positive predictor of participating in screening. Together with a special polyclinic it could be a good step forward!

## Preface

This report is the last step of finishing my Bachelor of Science in Health Sciences at the University of Twente. It describes a research partly conducted in Peru, partly in the Netherlands. Especially my trip to Peru was very interesting and a great experience!

First I would like to thank everybody who helped me to go to Peru and have a great stay there; language and voluntary work organization 'Het andere reizen' to arrange a place to do research, learn Spanish and live, my parents who supported me and the physicians in EsSalud dr. Zea and dr. Mejia. Without them it was not possible to go to such a country. I also would like to thank the University of Twente to help me to come to this report. First my supervisor Ellen van Oost, who helped me during the whole process; from the first start of going to Peru till the end of this research report. Next to her I also would like to thank Marjan Hummel as my second supervisor.

Enjoy reading!

Enschede, 2008

Mariska Scholtens



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## 1. Introduction

In the Netherlands breast cancer and cervical cancer are getting a lot of attention. October as a special 'breast cancer/ pink ribbon' month and new developments as vaccination against cervical cancer are regularly in the news. Women in the age group most at risk get invitations to get screening to find possible cancer at an early stage to start treatment as soon as possible and information is widespread available.

In the second year of the bachelor Health Sciences at the University of Twente 'Service Management' was one of the subjects. To explore a service the mammacare centre of the MST, Medisch Spectrum Twente, was chosen. It was interesting to see how a team of physicians, special mammacare nurses and others tries to improve care around women with breast cancer. They wanted to take the worries away and to avoid long waiting time by offering all examinations in one day.

In the curriculum of the bachelor Health Sciences a minor was obligated in the third year. The minor International Management was one of the possibilities to go abroad. Because of the interest in services around breast cancer and in Peru, a research subject was there. A hospital, hospital EsSalud, in the highlands of Peru accepted a foreign student to do research. In first instance the main focus was to see whether there were any organizations specialized on the situation of women and cancer. The expectation was that prevention activities were minor but the objective was to know what kind of role those organizations had; doing nothing? Trying to place it on the policy agenda? It was very difficult to get contact with those organizations because there were only a few organizations and they were mostly located in Lima, the capital of Peru. The region Cusco did not get much attention of organizations. After observing the physicians in hospital EsSalud for a few weeks several questions were open; why are there no prevention activities in this city? Why are women ignoring signs of cancer? And why is this not the case in the Netherlands?

### 1.1 *Formulation of the problem*

The incidence rates (the number of new cases of a disease in a certain time per unit of the population) in the Netherlands and Peru are rather different. In Peru the incidence rate per 100.000 for breast cancer is 35.1 while in the Netherlands this is 86.7 (GLOBOCAN 2002, 2004). So breast cancer in the Netherlands is more frequent than in Peru but when we look at cervical cancer it is the other way around. In this case the incidence rate in the Netherlands is only 7.3 while in Peru it is 48.2 (GLOBOCAN 2002, 2004). Both countries have to deal with these types of cancer. In the Netherlands many prevention activities are available, but in Peru those are not. With this research report I will analyze the situation in Peru and in the Netherlands to give an advice, if possible, in the direction of the physicians in Cusco in the case of prevention of breast and cervical cancer. Because these types of cancer (almost) only affects women, gender differences are taken as an interesting point of view. This point of view is an aspect of culture which is important when you have to deal with different countries because different countries means different cultures. Therefore the following research question will be used;

'What kind of bottlenecks are present around the prevention of breast and cervical cancer in the case of Peruvian women and in which way is it possible to stimulate this situation using insights of the Dutch situation?'

To answer this question, other questions need to be answered first;

1. What is the situation around prevention of breast and cervical cancer at this time in Peru?
2. In which way has the Dutch situation developed it self in the case of prevention of breast and cervical cancer?
3. Which social cultural differences, specially related to gender differences are relevant in the case prevention of gynaecological cancer in Peru?
4. Which insights from the Dutch situation can be useful into the Peruvian situation (Hospital EsSalud, Cusco) to stimulate it?

With prevention activities is meant all commonly accepted activities available. The insights of the Dutch situation are focused at the different present activities and how and why they are set up. In Peru I have only been to Cusco, which is my case, so my recommendations are focused at Cusco, which is my objective. Although the situation in other areas in Peru can be different I think my advice can be useful in other parts of Peru as well.

In the second chapter a theoretical framework is given. Theories used are about different kinds of prevention, agenda making (the barrier model) and culture (Hofstede). In chapter three a description of the Peruvian situation is made; Peru in general and a focus on hospital EsSalud. The fourth chapter is about the development of the Dutch situation and the different important facilities like screening, vaccination and mamma polyclinics. Chapter five puts both countries together and a conclusion and recommendations are given.

## 2. Theoretical Framework

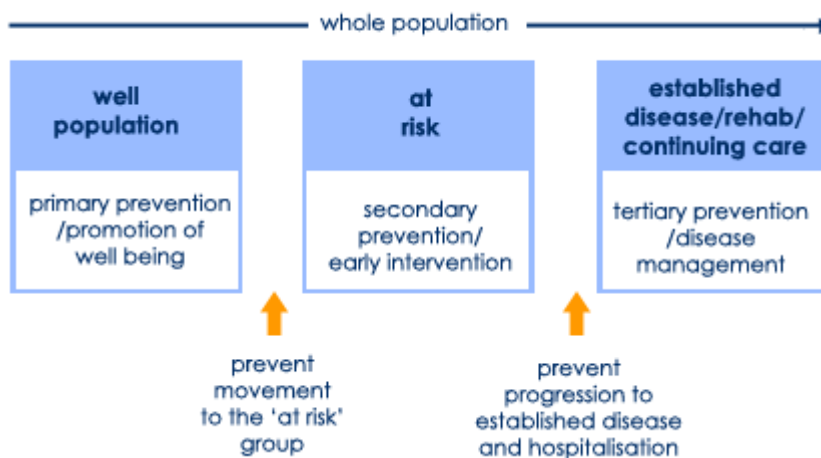
To get a structured vision of the situation around prevention of gynaecological cancer in Peru and the Netherlands regarding the gender differences, different theoretical backgrounds can help to answer the research question. It can be split up in three different parts with different literature. The first part is about the situation around prevention. There are different stages in prevention which are of importance. Second the development of implementation of policy around prevention activities in the Netherlands and Peru. To analyse this, a model is used. The third part is focused on the social cultural differences, especially the gender difference between men and women. These differences are important because of their influence on the execution of prevention. These different theoretical parts are described below.

### 2.1 Prevention

This thesis is about the prevention of breast and cervical cancer in Peru and the Netherlands but not every prevention activity is the same. This is because there are different stages in prevention. First primary prevention. Primary prevention includes all activities that really prevent a disease or in this case cancer from happening. Healthy people are subject in this stage. Secondary prevention is the same as early detection. In this stage activities are supposed to find early stages of diseases and health problems. This is important because when diseases are found in an early stage they can start treatment so the disease can heal earlier or just stops from being worse. People with a high risk or a genetic risk are subject. Tertiary prevention is especially for people who are already having a disease. In this stage they do not try to prevent the disease from happening but to prevent complications and help people to take care of themselves with that particularly disease (RIVM e, 2008). In this thesis primary and secondary prevention are at order, so to prevent the cancer from happening and to detect the cancer in an early stage.

Prevention activities can focus on risk factors of human behaviour like smoking but also at diseases or disorders. In that case you can think of vaccinations to prevent infection diseases or screening to early detect a certain form of cancer. Most of the time the activities are focused on a special group in the society that needs more protection or are more at risk than others because of their lifestyle for example (RIVM e, 2008).

Stage of prevention;



(ACT Health Promotion, 2008)

Most of the prevention activities in the case of breast and cervical cancer are focused at the secondary stage; early detection and intervention. But in the Netherlands a change is

perceptible to primary prevention in the case of cervical cancer. To see which stages are used in Peru and whether a change can be recommended, these stages of prevention are used in this report.

If we want to know if prevention activities in those stages are really used in a society or if there is no policy implemented, we can use a model to analyze in which phase prevention is situated.

## 2.2 Barrier model

Before a solution can be found for certain problems like having no prevention activities, there must be attention for it. When there is no attention for a problem nobody will start looking for a solution. The way a problem can get attention to reach the agenda (like the public, political or policy agenda) is called agenda making (Van de Graaf & Hoppe, 1996). There are different theories and models that describe agenda making. Hoogerwerf & Herweijer (2003) made a description of four different models. For this research I will use one main model; the barrier model. This model is chosen because it can define which phases are necessary to take to come to implemented policy; in Peru there are no prevention activities implemented while in the Netherlands there are several available.

The barrier model finds its origin in Bachrach & Baratz (1970). This model tries to explain why sometimes there is no active policy, even though there are severe problems. They call it 'non decisions'; the decision to do nothing for now. In the barrier model policy making (or the missing of it) is explained by different phases that follows from the problem till implemented policy. These phases can be seen as different barriers that have to be overcome before an active policy can be implemented.

First an undesirable situation has to be turned into realisation of the problem and into demands. Sometimes this is a minor barrier where the problem leads automatically to realisation. Other times it is possible that nobody knows about the undesirable situation. In this case it will be a barrier that has to be overcome. The next barrier is the one from demands to the public agenda. Realisation of a problem does not mean it is a problem that gets a lot of attention. The barrier that follows, is from the public agenda to the policy agenda. When a problem gets a lot of public attention it does not mean that policy makers use it. After this barrier has been overcome and the problem is on the policy agenda, there is no policy proposal available immediately and after a proposal is made it have to be implemented which can lead to another barrier. Some barriers are more easily to overcome than others. Some barriers are even not necessary to get new policy. Also politicians can come up with problems or policy proposals so the barrier around the public agenda is not used (Hoogerwerf & Herweijer, 2003).

*The barrier model; every ..... is a barrier (from Hoogerwerf & Herweijer, 2003).*



Central idea behind the model is that there are many problems and limited attention that can be given to those problems; the problems have to compete with each other. This limited attention that can be given is called issue-space. All people involved in the process have an active position in this model. They have to participate in an active way to overcome the different barriers. The success depends on their efforts and dedication to the problem. First a group of people that wants change have to commit themselves to the problem. This group exists of different people; journalists, politicians

or professionals for example. Next to groups like this the media has a very important part in the game. The media can reflect the opinion of the public but it can also show what is on the policy agenda. Subjects and problems that are big news in the media are likely to be placed at the policy agenda. It can also be the other way around; something that is on the policy agenda can get a lot of attention of the media which affects the public opinion. An other factor of success to overcome all barriers is when the problem is an emotional issue, when people think it is objectionable and when the problem seems solvable with policy (Hoogerwerf & Herweijer, 2003).

This model can tell us where Peru is at this moment regarding prevention activities. It does not tell us automatically something about all the reasons why they are at that point (financial, organizational or cultural reasons etcetera). Other models can be better to tell us that but are not used here. With this model the different steps the Dutch situation has taken to come to the point of active policy around prevention of breast and cervical cancer will be analyzed. The Netherlands has overcome all different barriers till the last step of implementation of policy. This model is also used to see which barrier is crucial at this moment in Peru; at which step are they? When the crucial barrier is clear, it might be possible to use the insights of the development of the Netherlands to get Peru across the next barrier. To see whether it is possible to use those insights the focus is to analyze bottlenecks related to cultural gender differences.

### *2.3 Culture; gender differences*

Breast and cervical cancer (almost) only affects women. So the cultural differences related to that fact are of importance; the so called gender differences. These differences between countries can be made visible with a research of a Dutch social psychologist Geert Hofstede. He has analysed a database with questionnaires from employees from seventy-two different countries, Peru and the Netherlands included. The differences he found could be distinguished into four different dimensions; individualism vs. collectivism, large vs. small power distance, strong vs. weak uncertainty avoidance and fourth masculinity vs. femininity. Later he added a fifth dimension; long vs. short term orientation (Hofstede, 1984).

Individualism and collectivism is about taking care and the concern for yourself versus taking care and the priorities of the group you belong to. In many countries in this world the interests of the group are more important than the interests of the individual. In a smaller part in this world this is not the case; in those countries people tend to think as individuals. The dimension large vs. small power distance is about the extend to which people accept an inequality like hierarchy and power of individuals and see this as unchangeable and normal. Large power distance makes people think that their supervisor is always right so they do not take many initiatives. In small power distance situations the superiors and the employees are seen as more equal to each other. Organizations can have more flatter hierarchy so subordinates can have access to their superiors. The third dimension is strong vs. weak uncertainty avoidance. This dimensions shows if people are threatened by an uncertain future and environment and if they need formal rules. It tries to measure if people try to avoid ambiguity. Those people are less risk taking and more worried about the future (Hofstede, 1984).

Most important in this thesis is masculinity vs. femininity because this dimension reflects the differences between men and women. According to Hofstede more masculine societies are more focused on assertiveness, status and working goals like earning money. Those are dominant values in a more masculine country. In feminine societies values like nurturance, relationships, personal goals, like a friendly atmosphere, and the overall quality of life are more important. Countries with a higher masculinity score tend to have more rigidly defined roles between men and women. Masculine societies have more restricted jobs for men and women while in more feminine societies a woman can drive a truck and the man can stay home watching the children. In these more feminine countries there is a greater belief in equality of the sexes while in masculine societies belief that inequality of the sexes is accepted. As you can see below the masculinity score

for the Netherlands is only 14 and in Peru it is 42. You can say that the Netherlands is more feminine oriented than Peru. This is important because breast and cervical cancer is only diagnosed with women. In societies with big differences between men and women (high masculine scores) this can be problematic in approaching such diseases.

Below the scores for The Netherlands and Peru;

Table 1; Scores of Hofstede

Country	Power Distance Index	Individualism	Masculinity	Uncertainty avoidance index	Long/short term orientation
The Netherlands	38	80	14	53	44
Peru	64	16	42	87	-

(Hofstede, 1984)

Besides the importance of the position of men and women, other aspects need to be taken into account. Because Hofstede does not use more dimensions than those mentioned above I will use some other culture components. Culture can also be described with the following components; Aesthetics, attitudes and beliefs, religion, material culture, education, language, societal organization, legal characteristics and political structures (Ball et al., 2006). Of these components attitudes and beliefs and education are important in this thesis because they affects women's behavior in an important way. Breast and cervical cancer is only diagnosed at women so the attitudes and beliefs of women towards cancer and prevention are important aspects. Attitudes and beliefs includes attitudes towards time, achievement and work and change. Besides the different attitudes and beliefs, education of the women is an important factor. When women have had more education the chance they know more about cancer is bigger. This is important because when women know more and they have less anxiety of cancer they tend to accept and seek screening more often for example (Agurto et al., 2004).

To give recommendations to an other country cultural differences have to be taken into account. With this theoretical background about gender differences I will analyze what kind of influence these differences have on the prevention activities. When this is clear, it might be possible to stimulate the situation with insights of the Dutch situation to come to the next step.

#### 2.4 Research methods

To come to an answer of the research question different aspects are important; Observations, literature and document research, and interviews. For the first sub question about the situation in Peru at this moment, one case hospital in Cusco, Peru, was chosen. Different (surgical) oncologists and nurses were observed here. Interviews were held with general oncologist dr. Osbert Mejia and surgical oncologist dr. Jose Zea. Next to the interviews multiple informal conversation were made through a period of three months. These conversations took place in Hospital EsSalud and had topics about the situation in Peru and in the hospital. Statistical data about gynaecological cancers in hospital EsSalud was also gathered here. To answer the second question about the development of prevention activities in the Netherlands, an interview was held with Remco Reij, the coordinator of the breast cancer population research in the Netherlands. He works at the Rijksinstituut voor Volksgezondheid en Milieu (RIVM). The RIVM is a research institute of the government especially to research public health and the environment. Next to conducting research they are also collecting knowledge worldwide to use it in the Netherlands. Every year they bring out many advices and rappsorts. The centre of screening is located there. During my bachelor course I had an interview with a mammacare nurse at the centre of mammacare of the Medisch Spectrum Twente.

Next to the practical part, document research was done to complete the data for answering the second question. Different primary sources were consulted like special

reports of the Health Council of the Netherlands. A literature study was also carried out about the situation in Peru and the different attitudes and beliefs of women towards cancer. This was necessary to describe the present situation in Peru and answer question three about which cultural gender differences were important. To find literature the database Science Direct and Google Scholar was used with the keywords; breast cancer, cervical cancer, prevention, screening, Peru and a combination of these words. To complete all statistical data, different international databases were used.





### 3. Peru: Present Situation

To get a better view and understanding of the situation around prevention activities in the case of the hospital in Cusco, a broader view of Peru is necessary. In this chapter the present situation in Peru is subject. First Peru in general is described in the case of prevention of breast and cervical cancer, later a local focus on hospital EsSalud in Cusco. In both cases, Peru and hospital EsSalud, the appearance of the diseases, status of prevention activities and problems with prevention activities are described to get a clear view.

#### 3.1 Appearance

##### 3.1.1 Cervical Cancer

Worldwide, cervical cancer is an important public health problem. It is the second most common cancer among women but in many developing countries it is the first. In the year 2000 an estimation of 468,000 new cases and 233,000 deaths of invasive cervical cancer in the world was made. 80% of those cases occurred in less developed countries (Parkin et al., 2001 in Luciani & Winkler, 2006). In Peru, like in many other developing countries cervical cancer is the main cause of cancer-related death among women. Especially in the age of 15 to 64 (Ferlay et al., 2004 in Coffey et al., 2005). The estimated incidence rate for cervical cancer is 48.2 per 100,000. The incidence is the number of new cases of a disease in a certain time per unit of the population. It can be given as number per 1.000 people or 100.000 for example. The mortality rate is estimated at 24.6 per 100,000. These rates are one of the highest in the world compared to the world incidence rate. This is estimated at 16.2 per 100.000 (Ferlay et al., 2004 in Luciani & Winkler, 2006).

##### 3.1.2 Breast Cancer

Next to cervical cancer, breast cancer is an other frequent cancer among women (Alarcon-Rozas et al., 2005). In the last decades the incidence and mortality rates from breast cancer in many Latin American countries increased. These increased rates are thought to be due to socioeconomic development and consequent changes in life-style and reproductive behaviours (Lannin et al., 1998). The incidence rate in Peru from breast cancer is 35.1 and the mortality rate 9.7 (PAHO, 2007).

These incidence and mortality rates are estimations of the GLOBOCAN 2002 database of the International Agency for Research on Cancer. Due to the missing of a national organization which can register all statistical data a clear estimation is very difficult.

Table 2; Incidence rates Andean Countries

	<b>Bolivia</b>	<b>Colombia</b>	<b>Ecuador</b>	<b>Peru</b>	<b>Venezuela</b>
<b>D.25.2.0-Estimated incidence of malignant neoplasms of the female breast, adjusted [per 100,000 pop.]</b>	24.7	30.3	23.5	<b>35.1</b>	34.3
<b>D.26.2.0-Estimated incidence of malignant neoplasms of the cervix uteri, adjusted [per 100,000 pop.]</b>	55.0	36.4	38.7	<b>48.2</b>	36.0

(PAHO, 2007; derived from GLOBOCAN 2002)

### 3.2 Prevention

Because cervical cancer is the main cause of cancer-deaths among women, most attention is given to this type of cancer. This is also visible in all research done in Peru; most are about preventing cervical cancer. Next to this cervical cancer is one of the most preventable cancers (Paz Soldan et al., 2008). Cervical cancer can be treated in the first two stages of prevention. Primary prevention of cervical cancer mainly involves exposure to the virus that causes this cancer; the Human Papilloma Virus. This virus can be sexual transmitted so a woman and of course the partner need to limit there sexual partners. Some studies shows that using a condom can reduce the risk of exposure, but it is not as effective a with other sexual transmitted diseases. Primary prevention is in this case very limited so most cervical cancer prevention options are focused on secondary prevention. This involves different types of activities of screening at-risk women like Papanicolaou (Pap) smears and the treatment of pre-cancerous lesions (Bishop et al., 1995). The Pap smear is a smear that collects cells of the cervix. This smear shows the progression of the cancer which underwent different stages (Morabia & Costanza, 2007). These forms of prevention are known in Peru, but not used widespread in a screening programme.

#### 3.2.1 Absence of widespread screening

Screening is a form of secondary prevention used in a group of people (like women in a certain age group). It is about testing people who are at first sight healthy. The test is to separate a group with a small risk of getting a certain disease from a group with a high risk of getting that particularly disease. The purpose of screening is to detect a disease early to improve treatment results or to create more treatment options. It is an important activity because it is supposed to reach a lot of women at a time.

For more than thirty years there are prevention services active in Peru. It is even declared as national priority. In 1998 the 'National Plan for the Prevention of Gynecological Cancer' started in Peru. This plan not only pointed out prevention strategies for cervical cancer but also for breast cancer. In the year 2000 the Ministry of Health developed the 'Manual of standards and procedures for the prevention of cervical cancer' (Luciani & Winkler, 2006) but like in many developing countries the screening activities are not widespread and the services they offer are most of the time not enough. Often they are only offered by district hospital gynaecological or antenatal units (Bishop et al., 1995). The women who are most at risk in Peru are women aged 35 to 50. Those women have not been systematically screened for cervical cancer (Gage et al., 2003 in Luciani & Winkler, 2006).

Because of the declaration as national priority and developing a manual with norms it is obvious that the government is aware of the problem. They put it on the policy agenda and even made some decisions (like making the manual). So this problem passed most of the phases in the barrier model. Only the last step seems to be difficult; from making a decision to the implementation of well working policy, which would be in this case prevention activities nation wide. This last barrier is crucial, but the question is why. According to Hofstede a more feminine society takes more care of each other; Peru has a score of 42 which indicates a more masculine society where nurturance and an overall quality of life are less important than in a more feminine society. This can indicate one of the main reasons why there is no screening programme. Different aspects of the masculine/feminine culture can play a role in the problem of having no prevention activities. Those aspects are analyzed below together with the other important cultural aspects attitudes, beliefs and education. Next to the cultural bottlenecks, also organizational obstacles can play a role. It is important that you know all perceived barriers to understand women's views and behaviours towards disease prevention (Agurto et al., 2004). Because when women do not use the services, the programme is a failure. Research is done to analyze and give suggestions to improve the situation and to detect all obstacles that hamper good implementation. The distinction is made between

organizational and cultural bottlenecks because those problem have different backgrounds (cultural and organizational).

### *3.3 Problems with prevention activities*

#### *3.3.1 Bottlenecks related to service delivery*

First there are obstacles related to the organizational service delivery. An important one is the location of the health service. Especially for women who live in regions where there is minimal access to healthcare, location is an important factor of participation. Researchers of the Alliance for Cervical Cancer Prevention found that in Peru participation rates of screening in districts where the service was at a large distance or difficult to access were lower than in regions it was accessible or where a mobile service was brought to the women. They also found out that these mobile campaigns reduced loss of women that needed follow-up (visits, screening, treatment), because the structure of the service delivery system seems to be an important barrier also. Another bottleneck is the need for information about the costs. Troubles with screening were also caused by women thinking that a pap smear costs a fortune (Bingham et al., 2003). In most Latin American countries a pap smear is free of charge, but when women are afraid of the costs of treatment and medication it withholds them of attending screening (Agurto et al., 2004). A pap smear is relatively not very expensive, but making a mammography is. Next to just making a mammography the machine itself is a big investment not many hospitals can make (Alarcon-Rozas et al., 2005). The quality of the screening must be checked regularly. When quality is poor, the women can not be helped as they should. The screening must try to avoid false positive and false negative results as much as they can. According to Agurto et al. (2004) rejected pap smears by laboratories were mentioned in many Latin American countries, so the test has to be redone, which is not efficient. Privacy and courtesy of health providers can also be a barrier for many women. Privacy is very important for women undertaking a pelvic examination but research found out that it is not guaranteed. Women reported a lack of privacy such as interruption during the examination or examinations at corridors of health centres or other not appropriate locations. Women also reported that they were treated disrespectful and discourteous by healthcare providers. They did not give enough information in a way the women understand (Agurto et al., 2004).

#### *3.3.2 Bottlenecks related to culture, gender and knowledge*

Second are bottlenecks related to socio cultural norms and women's beliefs. As mentioned before women's attitudes and beliefs (one of the cultural components) are important factors. A first obstacle is that women feel ashamed and embarrassed having their genitals be exposed and touched by a stranger, especially by male providers (Agurto et al., 2004 & Bingham et al., 2003). A main barrier is the fear of cancer in general. Most women do not want to know if they have or might have cancer because they think they die eventually of the disease. Some know there are treatments available but those treatments will leave them sexually disabled and will result in a loss of womanhood they believe. They are afraid of a hysterectomy or a mastectomy. These fears are not strange when you know that an amputation has been used for years as a single treatment in Latin America (Agurto et al., 2004) (also in Peru (interview Zea, 2007)). This attitude towards fears may result in negligence of symptoms of the disease but also to a reluctance to get screened (Bingham et al., 2003). Next to this, it is not known by most women that cervical cancer and cancer in general can be a preventable disease (Agurto et al., 2004). So next to the attitude and beliefs issue an information problem is present. This can be caused by the lack of good education (an other cultural component). When women never learned about cancer and prevention they simply do not know. They do not go to a hospital before they feel sick. So when they go to a hospital is too late. The cancer is at that time in an advanced stage which is difficult to treat (Salvador-Dávila & Gaffikin, 2003). Besides this lack of information about the cause, treatment and prevention of cancer many (most unscreened) women believe that screening can be a harmful or even evil practice. Not only they are thinking it is harmful but also their husbands have a powerful influence. It is a key factor that women's

decision to attend screening is influenced by the support of the husband. When the husband is supportive in emotional and financial ways, it is more likely that women accept screening (Bingham et al., 2003). When a husband does not want to support his wife this can be due to the different position women have in Peru, according to Hofstede. When women are not equal to men, a husband can believe that a woman with cancer is even less worth. In the past many husbands did not give any permission for their wives to get an examination. Health providers believe this is changing, but it could still be an extra obstacle (Salvador-Dávila & Gaffikin, 2003).

All these bottlenecks are connected to cultural gender differences and the absence of knowledge / education. Women have many fears because it is unknown that cancer can be treated very successful when detected early. This early detection is also a difficult point because the women do not understand that pre-cancerous cells are not cancer yet (Salvador-Dávila & Gaffikin, 2003) and some women even think it is evil. This lack of information can be caused by differences between men and women; when women do not get as much education as men, they do not get the chance to learn about it. The Hofstede score of 42 indicates a more masculine society, where men and women have different roles which can explain these problems.

Next to literature about the bottlenecks that hamper good implementation of prevention activities, research is done to find predictors that are essential in women accepting prevention.

### *3.3.3 Research*

Several research projects are carried out in Peru to find what kind of predictors are essential, why women do not have screening and what kind of approach may work. As stated earlier most of the projects are about the prevention, screening and treatment of cervical cancer. Most are also recently conducted by Western (American) and Peruvian researchers so that indicates that more attention is given to this problem. In 2007 Winkler et al. came to the conclusion that 'it will be essential to explore new and creative strategies to encourage screening in this hard-to-reach population' (p. 22). This study followed women who were exposed to different health education activities. The two groups which were compared exist of women who sought screening and women who did not. One of the predictors of screening they found was 'knowing other screened women' but also 'attending an awareness-raising session'. So knowing they are not the only one seeking screening and pointing out the importance of screening can contribute to the success of a prevention programme. Paz Soldan et al. (2008) also found an education predictor of having pap smears next to being sexual active, having children and increasing age; completed secondary education. Their conclusion of the project is that if Peru wants to improve their pap smear coverage the target should be underserved women and regions with less coverage. Also the regions are of importance because they also found that women living on the coast were having more likely pap smears than women from the highlands or the rainforest. More information and education is also necessary because according to Alarcon-Rozas et al. (2005) many women do not know the utility of for example breast (self) examination or pap smears. Their conclusion is that it is urgent to have a gynaecological cancer preventive programme (so for cervical and breast cancer) as well as having more mammography machines available.

### *3.4 Hospital EsSalud*

The prevention activities that are carried out in Peru mostly take place in Lima, the capital city. This big city on the coastline of Peru has more facilities than most other places. Earlier it was even necessary to go to Lima if you needed cancer treatment. In these days that is not the case anymore; also smaller cities can treat cancer (Interview Zea, 2007). In the case of prevention activities location is one of the problems described above; women on the coastline are more likely to have pap smears than people from the jungle or highlands (Paz Soldan et al., 2008).

The case hospital, Hospital EsSalud, is located in Cusco. Cusco is a city in the highlands (the Andes) of Peru. This is in the centre of Peru at an altitude of 3300 metres. The Andes lies between the coastline (Lima) and the rainforest (Amazon jungle).

The hospital has every basic specialty available. The oncology department belongs to the specialized surgery department. The hospital is the biggest in Cusco, it has a total of 300 beds (interview Zea, 2007). The oncology department started ten years ago with only two beds. Nowadays there are 16 beds. According to Dr. Zea (interview, 2007) this department in EsSalud is a special one, because in many hospitals the different kinds of cancer are with the different departments. For example breast and cervical cancer in many hospitals belongs to the gynaecology department. The main operations of the oncology department of Hospital EsSalud are to treat the people with different cancers to make them better or to give palliative treatment. The hospital is only for people with a social security in Cusco, this means all people with a regular, legal job. In Cusco there are three general hospitals. The people with health insurances can go to EsSalud. People with no insurance can go to the other public hospitals, but they have to pay for every treatment they get. Beside these general hospitals there are several (private) clinics. When someone wants a second opinion or just more service they can go to one of them, but they have to pay for everything. You can find the healthcare services mostly in the cities. So the people in the highlands and the jungle do not have much access to any healthcare (interview Mejia, 2007).

### 3.5 Appearance of breast and cervical cancer in EsSalud

In Hospital EsSalud in Cusco it is the other way around when we compare incidence rates of breast and cervical cancer on national level with the hospital. In EsSalud breast cancer is more frequent than cervical cancer.

Table 3; Cancer Statistics Oncology department EsSalud (interview Mejia, 2007):

	Female	Male	Total
All cancers	525	276	801
<b>% all cancers</b>	65.5%	34.5%	100%

	Frequency	Percentage of all cancers
<b>Cervical cancer</b>	69	8.6%
<b>Breast cancer</b>	136	17%

	2003	2004	2005	2006	2007 (till may)	Total
<b>Cervical cancer</b>	3	19	29	15	3	<b>69</b>
<b>Breast cancer</b>	16	54	31	32	3	<b>136</b>

A first striking point is that more than 65% of all cancer patients in EsSalud is a woman. Both cervical and breast cancer are together a big part of all cancer patients coming to EsSalud. In total more than 25% of all cancer patients coming to EsSalud is having cervical or breast cancer (over the past years). This is a huge part of all cancer patients! This can be due to the fact that hospital EsSalud has an special department of cancer so more people are coming to that hospital but still they have to have an insurance. But having insurance can possibly mean an other lifestyle or educational level. The literacy rate can be a measure of education. In Peru in general 82.1% of the women

above fifteen years can read and write. Compared with the Netherlands; here it is 99% of the women (CIA, 2008). The school life expectancy (from primary till tertiary education) is also lower in Peru; 14 years. While in the Netherlands this is 16 years for women (CIA, 2008).

The oncologists do not have any well registered statistics about the mortality, but the physicians say it is high. According to them this is due to not having any prevention programmes so when the women come to the hospital the cancer is most of the time in a very advanced stage (one of the obstacles described in 3.3.2). According to Dr. Zea and Dr. Mejia this is about 60%. Very advanced stages of cancer are difficult to treat so the mortality will get higher because the patients have a higher risk to die (RIVM h, 2008).

### 3.6 Prevention in EsSalud

At the time of the research in hospital EsSalud there was no prevention or screening project going on in Cusco. Many years before EsSalud offered women an information flyer with information about cervical and breast cancer. In this brochure warning signals of their body were described in case of cancer, the way they could do self examination of the breasts, information about a Pap smear and the importance of early detection. When they were out of copies, they stopped. After a few weeks of the research a big information poster emerged in the central hall of the hospital. It pointed out the importance of regularly screening. According to the physicians it was placed by a governmental organization because that month the woman was a central health subject. Other examples were the month of (anti)smoking etcetera (interview Mejia, 2007).



The physicians say prevention activities are important, so they are aware of the problem (absence of good screening activities). Years ago they made a decision of spreading information flyers, but they stopped it. At this time they say every prevention activity is too expensive and they have no time to organize it. So they are going forward and backward in the barrier model. At this time they made the decision of doing nothing; a non decision according to the theory of the barrier model.

### 3.7 Problems with prevention activities in EsSalud

The bottlenecks of attending prevention activities mentioned in 3.3 were also mentioned by the physicians in hospital EsSalud, especially those about socio cultural norms and women's beliefs. Most women that came in with for example breast cancer were already in stage III or even IV. These stages are difficult to treat and an amputation can not always be avoided. According to these physicians this negligence of

cancer resulted in high mortality rates. They waited with going to a hospital because they did not want to know they might have cancer. Having cancer is socially not accepted so they do not get any support of their husbands. This negligence was also a result of a lack of information; they do not know the symptoms, that it sometimes can be prevented and that it can be treated especially when it is detected early. A good example from the hospital was a nurse from the hospital who recognized the symptoms so she immediately went to the oncology department. She had education and information and knew the possibilities. Her attitude against cancer was different than the attitudes of most women in Cusco (interview Zea, 2007). This means it is possible to improve the situation for a bit, when more information is given and accepted to and by women and their educational level will be improved.

### *3.8 Conclusion*

In Peru incidence and mortality rates of breast and cervical cancer are high. That is why it is an important health problem and it is declared as national priority. Despite attention and efforts of the government there is no widespread screening programme implemented to screen all women in the group at risk and to provide secondary prevention; Peru is stuck at the last barrier in the barrier model (before implementation). This is due to different problems related to the service delivery itself, culture, gender and knowledge (education). Women have many fears, absence of information and do not get support or permission of their husbands to get an examination. In hospital EsSalud in Cusco the same obstacles play a role, but where the government give more attention to it and made a decision, hospital EsSalud just mention it as important but is not making any attempts to improve the situation. They are still at around the decision barrier.





## 4. The Netherlands; the Dutch development

In the Netherlands different prevention possibilities are available. Some important facilities are set up by the government. Besides the government other organizations and foundations are active also. The different aspects of the Dutch situation are at different stages of prevention and different levels (nation wide / hospital). Those possibilities are partly set up because of the organizational health structure in the Netherlands. The Netherlands is a typical 'verzorgingsstaat'; a welfare state. This is part of the more feminine culture. Taking care for each other is an important aspect of a feminine culture.

According to the RIVM (i, 2008) prevention of breast cancer in the Netherlands mainly exists of screening (early detection or so called population research). Next to this genetic research can be done to early detect cancer with women who are at high risk of having a hereditary form of breast cancer. Also breast self examination and information are known prevention forms, although there is no scientifically proof of the efficacy of breast self examination. With cervical cancer, screening is most applicable too, but also information and a new development vaccination are used or are going to be used in the Netherlands. Genetic research is not described in this report because it affects only a small part of the group at risk. It is not applicable for all women. Because of the importance of population research in the Netherlands, this is one of the main prevention activities described. This is on secondary prevention level. The Netherlands is also introducing a new development on primary prevention level; vaccination against cervical cancer. Also information is very important, this is integrated in different forms of prevention; women get information while getting screened for example (interview Reij RIVM, 2008). An other place where a lot of information is given is in a mamma polyclinic. This special polyclinic for breast cancer is not only to early detect cancer but also to treat the women.

In this chapter first the appearance of breast and cervical cancer in the Netherlands is described. Next are the main prevention activities nation wide are explained. The last part exists of a special development on local hospital level; the mamma polyclinic. Not only a description is given of the use of those activities nowadays, but also why and how those activities are set up.

### *4.1 Appearance of breast and cervical cancer*

Every year the cancer incidence and mortality rates are measured, but last years one thing stayed the same; cancer is second cause of death in the Netherlands. In the Netherlands breast cancer is the most common cancer among women, although it can affect men as well. Every year there are about 12.000 women who get the diagnosis 'a malignant tumor in the breast' (RIVM a, 2008). This means that one out of nine women will develop breast cancer once in their lives (IKC Amsterdam, 2008) although some organization even say it is one out of eight (KWF Kankerbestrijding, 2008). The incidence rate (of invasive breast cancer) was 91.3 per 100.000 in 2005 (NKR, 2008). The rates are high, even if you compare it to other countries (RIVM b, 2008). An other cancer which can affect only women is cervical cancer. In the Netherlands in 2005 there were 687 women who got an invasive form of cervical cancer. This means the incidence rate (of invasive cervical cancer) was 5.8 per 100.000 in 2005 in the Netherlands (NKR, 2008). In comparison with other European countries this number is relatively low. Especially when we look at countries of Eastern Europe; here the incidence and mortality rates are higher than in the Netherlands. The number of new cases is decreasing, but the percentage of women with this disease between the age of 35 and 64 is increasing with four percent every year. This is a result of the mortality rates which are also decreasing.

Table 4; incidence rates the Netherlands

	<b>Breast Cancer</b>	<b>Cervical cancer</b>
<b>Incidence rate per 100.000 (Age-standardized rate, world standard)</b>	91.3	5.8

(NKR, 2008)

#### 4.2 Primary prevention; vaccination

Cervical cancer is one of the most preventable cancers. For this type of cancer they know the cause, which is not always the case with other cancers. The Human Papilloma Virus causes pre-cancerous cells which will develop into cancer. The HPV virus exists of over eighty different types. Only fifteen of them give an increased risk of developing defect cells. Every type has an own number. HPV 16 and HPV 18 are responsible for about 70% of all cervical cancer cases in the Netherlands. Most of the infections of HPV are not leading to any complaints or problems (RIVM f, 2008). The Netherlands has a successful screening programme, which will be described in 4.3, but recently new vaccinations are available at the market. This vaccination might be used to prevent cervical cancer. The women infected with the HPV types that cause pre-cancerous conditions eventually can develop cancer. The vaccine prevent the development of those pre-cancerous conditions so it is likely that it will prevent the cancer itself. This can be a breakthrough because it would enable primary prevention instead of early detection and early treatment activities like with a screening programme which is secondary prevention (Health Council, 2008).

##### 4.2.1 Making policy

With this new information the government of the Netherlands had to consider whether they should include vaccination into the National Immunisation Programme. This programme is used to vaccinate people on a large scale. So when the vaccine came available in November 2006 the problem came directly on the policy agenda. The barriers before, from the undesirable situation of women getting cancer till the policy agenda, were already taken with the screening programme. With primary prevention the target group is in principle healthy. So when you include a new vaccination into the programme you have to be sure that the vaccine is both safe and effective. The government (in this case the ministry of Health) asked the Health Council of the Netherlands for advice. So the government made a decision to further investigate it. The Health Council used several criteria because before a new vaccine is included in the programme it is judged to seven criteria. The criteria are comparable with the criteria of Wilson and Jungner (4.3) like that the vaccine must prevent a serious public health problem and the vaccine should be an effective means of preventing the relevant disease (Health Council, 2008). After research the Health Council of the Netherlands came with a positive advice to introduce the new vaccine into the National Immunisation Programme for all girls with the age of twelve because vaccine is most effective before a woman gets sexually active. The ministry of Health took over this advice and wants to start this programme in 2009. He also starts a catch-up programme for all thirteen to sixteen year old girls. So the ministry of Health made a decision and is now implementing policy, so all barriers from the barrier model were overcome without many troubles. That is because the Dutch society is many times called 'a welfare state'. This welfare state can be explained by Hofstede. The masculinity score of the Netherlands is only 14, in other words; the Dutch society is a more feminine culture. In these kind of cultures quality of life, taking care of each other etcetera is important. That is why there are many services in the Netherlands to improve the quality of life and why the government is 'taking care' of their citizens. It is one of the duties of the government of the Netherlands to organize healthcare at a way it is available for all Dutch inhabitants

#### *4.2.2 Downsides*

Implementation of the vaccination does not mean that there are no doubts about this vaccine. The burden of this disease is in the Netherlands much smaller than in countries with no effective screening programme (like Peru) so the health profit that can be won is less than in other countries. To vaccinate young girls on a wide scale is also very expensive, especially when it is used next to an screening programme (which is cost effective in the Netherlands (Health Council, 2006)). Next to this it is not known if the vaccine really can prevent cervical cancer. This can be clear in many years. This is also with the side effects; according to the Health Council there is nothing to worry about, but it is not totally clear, especially not about the target group (young women). That is why a monitoring research is necessary.

#### *4.3 Secondary prevention; screening*

##### *4.3.1 Breast cancer*

Screening is different than other health care matters. In general health care is given to people with certain complaints, so the initiative is with the patient. With screening this the other way around; the initiative is with the screening organization but with every screening risks are involved. All pro's and cons have to be considered because only a few of all people will benefit from it. To protect all people against screenings that can be dangerous, the Netherlands has a law of population research (Health Council, 2006).

In the Netherlands in 1989 they started a population research for breast cancer because of the high incidence and mortality rates. Every woman between the age of 50 and 75 gets every two years an invitation to get a check-up. During these checks they will get a mammography in a movable research bus (IKC Amsterdam, 2008). With this population research they will try to detect breast cancer as early as possible. Early detection of breast cancer has improved the chance of treatment and the survival of this disease a lot in the last couple of years. It also improved the chance of getting less radical treatment. Together with the mammography they get information about breast cancer like flyers about what to do when getting bad news or what kind of treatment possibilities are available (interview Reij RIVM, 2008).

##### *4.3.2 Development of national screening programme*

Before the actual start of the national screening programme of breast cancer several test projects were held in Utrecht and Nijmegen in 1974/1975. The test projects were based on positive results from an American research (Gezondheidsraad, 2002). In the eighties the group of medical professionals (in this case surgeons) were detecting an increasing incidence and mortality rate among women in the case of cancer of the breast. In that time already one out of every ten women would develop breast cancer once in their lives, while in these days it is even one out of eight. The medical professionals were worried about these increasing numbers so they realised there was a problem. So an undesirable situation occurred and the professionals working with breast cancer patients facing that situation realised it would be a problem. This is the first barrier of the barrier model that was overcome. After this also patient organizations were involved. So it was not only an important problem for the physicians, but also for the people involved; patients. Together they put more pressure on it by asking the government (ministry of Health) for help (interview Reij RIVM, 2008). This can be put in the 'turning into demands' part. The next important step was made by the ministry of Health; they asked a commission of the Health Council of the Netherlands to see whether a national screening programme was a good idea. With this step the problem was placed at the policy agenda.

The only evidence the Health council had to base their advice on was a randomised trial from Sweden. This research had many points of discussion but it was the only large scale research that tested the effects of a large screening programme to detect breast cancer (interview Reij RIVM, 2008). To find out whether a screening

programme does more good than harm the Wilson and Jungner (1968) screening criteria are used (besides the comparison with research). Those criteria are as followed;

#### **Wilson and Jungner classic screening criteria**

1. The condition sought should be an important health problem.
2. There should be an accepted treatment for patients with recognized disease.
3. Facilities for diagnosis and treatment should be available.
4. There should be a recognizable latent or early symptomatic stage.
5. There should be a suitable test or examination.
6. The test should be acceptable to the population.
7. The natural history of the condition, including development from latent to declared disease, should be adequately understood.
8. There should be an agreed policy on whom to treat as patients.
9. The cost of case-finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole.
10. Case-finding should be a continuing process and not a "once and for all" project.

All these criteria are asked as questions. The criteria are essential in the barrier model; every question should have as an answer 'yes' otherwise the decision would be no screening. Answering all these criteria are small steps to overcome the last barrier from 'placing at the decision making agenda' to 'placing on the implementation agenda'. When all of these questions have an positive answer and you have concluded that the pro's are more important than the con's, the next step can be made; starting screening. In the Netherlands this was after positive advices of the Health Council of the Netherlands (an independent advice organization) and the 'Raad voor de Volksgezondheid & Zorg'. The state secretary of Health started with the preparation of a national screening programme in 1987 (Gezondheidsraad, 2002). With this last point implementation was a fact.

#### *4.3.3 Attendance and effect of the programme*

Although the programme was implemented, the attendance of the women had to be on a high level because otherwise it would still be a failure. The attendance of all invited women is over 80% in the Netherlands. Reasons for women to not accept the invitation are pain, making a mammogram can be painful, and normative beliefs of others. For example when relatives encourage the women to accept screening, they are more like to attend (Allen et al., 1998; Lechner et al., 1997 in Tacken et al., 2006). Also the thought 'I will found out myself trough breast self examination' is a reason of not participating in screening. Especially this last point is worrying because when women do feel a lump it is already at a size which can be more difficult to treat. That is also the reason why breast self examination is not widely used anymore as recommendation. It should be clear that watching your own body is important, but trusting on breast self examination is not (interview Reij RIVM, 2008; Gezondheidsraad, 2002). This does not mean it is not used anymore by professionals to detect breast cancer. In Germany they found out recently, that special trained blind women can feel tumors at a size of two millimetres while physicians who can see can feel lumps at a size of eleven millimetres (Bolwijn, 2008)! This is mainly because the sense of touch of blind people is far more developed than of people who can actually see. For this research six blind women were trained to do preventive breast examinations by physicians. At 56 of the 425 women who were taking part of the research, the blind women found a tumor which was not detected by the physician. In all of the 56 cases the tumor was confirmed by a mammography. According to the gynaecologist, involved in the research, this is enough evidence that it is useful to let blind women do preventive breast examinations. This concept is not used in the Netherlands at the moment, but they are interested to follow this example (Bolwijn, 2008).

Several evaluations concluded that the breast cancer screening programme caused a decrease in mortality of 25%. This percentage includes also the women who do

not accept screening. So when all women invited also accept it, it may be even higher (interview Reij RIVM, 2008; Gezondheidsraad, 2002).

#### *4.3.5 Cervical cancer screening*

Next to the population research in the case of early detection of breast cancer there is also a population research for cervical cancer (RIVM c, 2008). Every five year, all women between 30 and 60 years gets an invitation to examine a pap smear to look if there are cells which are 'defect'. In that case they can start a treatment early to prevent the disease of getting worse or even to prevent the patient from dying (RIVM d, 2008).

The development of the cervical screening programme is comparable with the development of the breast cancer screening. The same advice is asked by the ministry of Health to the Health Council. They used the same criteria to come to an advice. The ministry took over that advice and made a decision of implementing a screening programme.

To execute cervical cancer screening in the Netherlands there are twelve screening organizations. In total there are eighteen organizations because some are executing breast and cervical cancer screening. In the future the RIVM wants them to merge into five bigger organizations with more influence. This screening programme started in 1976. First only women between 35 and 53 were every three years invited. This changed in 1996; from this year all women between 30 and 60 were invited every five years. A big difference with breast cancer screening is that women with an cervical cancer screening invitation do not have to go to a movable bus but to their own general practitioner. The GP makes a pap smear and send it to a laboratory for research. When the results are back follow up examination or treatment can follow.

#### *4.3.6 Attendance and effect of the programme*

The attendance of cervical cancer screening is about 66%. This can be misleading because included in this percentage are also women who are already under surveillance of the GP and pregnant women. When we take those in account the attendance is about as high as with breast cancer (interview Reij RIVM, 2008). The fact that the women are invited by there own GP increases the attendance with 8 till 13%. This can be even 20% when the GP sends a reminder to those women who did not reacted on the first invitation (Health Council, 2006). This is important because one of the obstacles in screening of cervical cancer is 'forget to make an appointment'. So to increase the attendance, reminders are send to women who did not responded. Other obstacles are negative views of the test (Orbell, 1996; Lostao et al., 2001 in Tacken et al., 2006), perceptions of vulnerability and worry about cervical cancer itself. This increases especially when there is no female doctor or nurse available (Ibbotson & Wyke, 1995 in Tacken et al., 2006). But due to the screening programme the Netherlands has one the lowest mortality rates compared with other countries (VWS, 2008). Mortality is at this moment less than 40% of the mortality in 1960 (Laara et al., 1987, Levi et al., 2000 in RIVM j, 2008). The screening programme is also cost effective (RIVM j, 2008)

#### *4.4 Hospital level; Mamma polyclinic*

Above described activities are especially focused on primary and secondary prevention. Those are organized nation wide, but also hospitals in the Netherlands have special activities. Those are not only focused on prevention but also on treatment services. Because of the high incidence and mortality rates of breast cancer, special mamma polyclinics are very common in hospitals these days. Mamma means breast in Latin. Because those polyclinics are part of the hospitals, this is an instrument of services on a more local level instead of the national services like screening and vaccination.

When a woman finds an abnormal lump in her breast most of them go to their general practitioner. The general practitioner sends them to the hospital for further examination when he or she thinks it is necessary. Further examination exists of an (physical) examination of a surgeon, a mammogram and in some cases an

ultrasonography and a puncture. The other part coming to the hospital is send by the screening programme of breast cancer (described before). The mamma polyclinic tries to diagnose as early as possible, because early detection improves healing and survival. When breast cancer is found treatment can start. It is seen as necessary to come with quick and efficient dealing with the problem. This because it can give a clear vision of the situation and take away worries of the women (NVvH, 2005).

In many hospitals the examinations and treatment take place in a mamma polyclinic. A mamma polyclinic is in the Netherlands an efficient, patient friendly and quick service to diagnose and treat breast cancer. This means it is a step after the first prevention services; early diagnosis is important but a mamma polyclinic also gives treatment to women. In a mamma polyclinic a multidisciplinary team works together. According to the NABON, the national breast cancer consultation, a team needs to exist of the following professionals; a surgeon, a person for radio diagnoses, a pathologist, a radio therapist, an internist and a mamma care nurse or possibly a nurse practioner mammacare. In an ideal situation also a plastic surgeon and psychologist are available. All of the members of the team are specialised in diseases of the breast (NVvH, 2005). According to the NABON directive all examinations have to take place in only one day. 90% of the women need to get the results of all tests within a maximum of five days. The development of mamma polyclinics was not a specific agenda point of policymakers of the government but was part of the subject quality in healthcare focused on breast cancer. Patient organizations especially asked for a multidisciplinary polyclinic because it scientifically showed that the forecast for patients improves when she is treated in a special organization focussed on mammacare. Moreover a multidisciplinary team can be more efficient (less diagnostically tests for example) and cost effective (NVvH, 2005).

*'Welcome to our centre of mammacare'* (MST mammacare, 2008)



The surgeon is the head of treatment but many of the tasks can be take over by other team members. The mammacare nurse has a special place in the mamma polyclinic. One of her (the nurses are most of the time female) main duties are to give information and give emotional and psychological support to the women coming to the clinic. Because the physicians can differ during the process of examination and treatment, the mammacare nurse is the standard factor of communication for the women. This can give them more confidence and peace because stress can lead to anxiety of further screening for example (Ong, 1997; Brett, 2001 in Oncoline, 2008). According to quality criteria of the BVN, the breast cancer association of the Netherlands, there should be enough attention in which way the communication with women should be. Enough privacy and explanation of the examinations and results are important. What also should be mentioned is where women can find more information of their own (BVN, 2003 in Oncoline, 2008). These duties of the mammacare nurse are stimulating participation in prevention activities and reducing anxiety of the women. According to Fylan (1998) methods to increase participation and reduce anxiety are to provide more information, improve the quality of communication, increase women's satisfaction and to consider women's health beliefs. Although these methods of Fylan (1998) are based on cervical cancer screening, they are certainly applicable at breast cancer.

#### *4.5 Conclusion*

The incidence of especially breast cancer is very high in the Netherlands. That is one of the main reasons why there are several prevention and service activities available for all women at risk. To come to all the different activities of primary and secondary prevention, a development took place. First the medical professionals realised the high incidence and mortality rates. Together with patient organizations they put pressure on the government. The government placed the problem on the policy agenda. From this point they asked an objective council to give advice. After positive advice the government started to implement a screening programme. From realisation of the problem till successfully implemented policy; all barriers of the barrier model were overcome. Those activities like screening are typically aspects of the welfare state, which is part of a more feminine society. The screening programmes are a success; the attendance is high and mortality rates are decreasing. Also information as prevention tool is used together with screening but also at the hospital at mamma polyclinics. It is seen as very important, because it can take a lot of anxiety of the women away.





## 5. Peru vs. the Netherlands; Conclusion and Recommendations

In this last chapter both countries come together. First the appearance of the cancers of both countries will be compared. Next a conclusion will be given about the situation and the problems of Peru and hospital EsSalud. Together with the information of the Netherlands a recommendation will be given to the hospital to improve their situation as a first step forward.

### 5.1 Appearance

Breast cancer as well as cervical cancer are serious problems in Peru and the Netherlands. For this comparison different databases with incidence and mortality rates were found; every one with a different standard and from different years. The GLOBOCAN 2002, an international database, provides us comparable rates of both countries. When we take a look at the incidence rates we see that the breast cancer rate in the Netherlands is many times higher than in Peru. This can give an misrepresented view; although it is much lower in Peru this does not mean it is a minor problem. Many women are still getting cancer with the risk of dying. The incidence in the Netherlands is really high, even when you compare it to other western European countries. In the case of cervical cancer it is the other way around. The incidence in Peru is more than six times higher than in the Netherlands.

When we look at the proportions of mortality we see that in the Netherlands comparatively less women die of both cancers compared to Peru. In the Netherlands the incidence rate for cervical cancer is almost seven times lower than in Peru, but when we look at the mortality rates this is almost eleven times lower! These proportions can be a result of the successful prevention activities in the Netherlands and the absence of those in Peru. Much health profit can be won in Peru when more attention is given to prevent cervical cancer.

Table 5; Incidence rates Peru and the Netherlands

	<b>Peru</b>	<b>the Netherlands</b>
<b>Incidence rate breast cancer per 100.000 (Age-standardized rate, world standard)</b>	35.1	86.7
<b>Incidence rate cervical cancer per 100.000 (Age-standardized rate, world standard)</b>	48.2	7.3

(GLOBOCAN 2002, 2004)

Table 6; Mortality rates Peru and the Netherlands

	<b>Peru</b>	<b>The Netherlands</b>
<b>Mortality rate breast cancer per 100.000 (Age-Standardized rate, world standard)</b>	14.0	27.5
<b>Mortality rate cervical cancer per 100.000 (Age-standardized rate, world standard)</b>	24.6	2.3

(GLOBOCAN 2002, 2004)

Below are more recent numbers (2005) of the Netherlands. When we compare those with the rates above, we can conclude that the mortality rate is decreasing, while the incidence rate increases. This can be due to the national screening programme.

Table 7; Incidence rates of the Netherlands

	<b>Breast Cancer</b>	<b>Cervical cancer</b>
<b>Incidence rate per 100.000 (Age-standardized rate, world standard)</b>	91.3	5.8
<b>Mortality rate per 100.000 (Age-Standardized rate, world standard)</b>	20.5	1.6

(NKR, 2008)

## 5.2 Conclusion

### 5.2.1 Analysis

The problem is clear; there are no widespread prevention activities, like an important one as screening, implemented in Peru. Also in hospital EsSalud in Cusco no prevention activities are present. This is an undesirable situation because the incidence and mortality rates in Peru are high (table 1 and 2) and prevention can help save lives. To analyze this problem the barrier model is used. This model provides the different stages from the undesirable situation (high incidence/ mortality and no prevention) till implemented policy (implemented prevention). To analyze at which point both countries are with their prevention activities this model is used. Next is analysed which bottlenecks, especially related to gender differences, are responsible for not fully completing the stages of the barrier model in Peru. With insights of the Dutch situation, stimulating recommendations can be given that can be useful for the hospital in Peru. Therefore the following research question was applicable; *What kind of bottlenecks are present around the prevention of breast and cervical cancer in the case of Peruvian women and in which way is it possible to stimulate this situation using insights of the Dutch situation?*

A reflexion on the use theory should be made; when putting a developing and a developed country across each other, money will always play a role. This money-issue is not part of the theory about culture and the barrier model, but it is important. It is used as given that Peru has less to spend than the Netherlands.

### 5.2.2 Crucial barrier Peru

The barrier model gave us insight in the position where both countries are at this moment in the case of prevention of gynaecological cancer. Main conclusion of the situation in Peru is that they are stuck at the last barrier of the barrier model in the case of prevention (primary and secondary); from the decision making agenda to the implementation agenda. It is declared as national priority by the government and some prevention activities are there but most of the time they are not getting of the ground widespread. In Cusco, at the case hospital, they are even a little bit behind. They are around the decision making barrier. They have problems with making a good decision and not knowing what to do to implement a good service. At this time they do not have any prevention activity of their own. This includes every prevention activity from information till screening.

There are different reasons why Peru and hospital EsSalud are stuck at this last barrier. Next to general causes like organizational problems, a main cause is related to the gender differences, which is a focus of this analysis. Hofstede (1984) also confirms this with his research; Peru has a masculinity score of 42. This means a more masculine society with differences between the roles of men and women and where it is less important to take care of each other than in more feminine societies.

### 5.2.3 Bottlenecks

One of the main causes of staying at the last barrier found in this research are the cultural attitudes and beliefs of women which are often related to the differences between men and women, gender differences. Bottlenecks in Peru and in Cusco related to the knowledge, gender differences and attitudes and beliefs found in this research are;

- Being touched by a male healthcare provider (gender)
- Fear of cancer and treatment (knowledge)
- Fear of prevention activities because it is evil or useless (attitude and beliefs / knowledge)
- Negligence of symptoms of cancer (attitude and beliefs / knowledge)
- No support or permission of their husbands (gender)

Other bottlenecks found in Peru in general are obstacles related to the service delivery;

- Location of the service (too far away / geographical)
- Costs (of for example mammography machines)
- Quality of tests
- Privacy and courtesy of healthcare providers
- Inappropriate examination locations

The healthcare providers in Cusco mentioned, next to the bottlenecks related to gender differences and costs, an other problem;

- Not enough time to set up and use prevention activities

In literature also some predictors of participation are found; when women completed secondary education, knowing other screened women or are attending awareness raising sessions are more likely to participate in screening.

In Peru in general the bottlenecks are preventing the implementation of widespread prevention activities. In Cusco these problems also resulted in a non-decision, the decision to do nothing for now. To stimulate decision making and implementation, bottlenecks have to be overcome. This can be done with insights of the Dutch situation.

### 5.2.4 Insights Dutch situation

In the Netherlands the incidence rate of breast cancer is still very high, but mortality rates are decreasing because of a national screening programme. The same is the case with cervical cancer so prevention is effective. In the Dutch situation they overcome all barriers because there are several prevention activities up and running and are very successful. The government played an important role in this. They made the decisions of starting activities after positive advice of the Health Council of the Netherlands. In the Netherlands one of the duties of the government is to provide accessible health care for all citizens and to promote health in general. Prevention fits in this description. The government feels obligatory to have prevention activities because the Netherlands is a welfare-state, which is an aspect of a feminine society according to Hofstede (1984).

Different prevention activities in the case of breast and cervical cancer are available in the Netherlands;

- National screening programme
- Genetic research
- Information
- Breast self examination
- Vaccination (future)

At this moment most important in the Netherlands on national level are the screening programmes to detect breast and cervical cancer at an early stage. For this programme all women at risk (in a certain age group) are invited to join the programme. This programme resulted for example with breast cancer in a 25% decrease of mortality!

This could be even higher if all women accept screening, but the attendance about 80% (for both cancers) is already high. Information is also an important prevention tool and is integrated in different parts of activities. For example when women get screened they get information; when they are send to a hospital (mamma polyclinic) they get information. Breast self examination is not used anymore as recommendation towards women, but is still used by professional in combination with a mammography. Vaccination is a primary prevention tool of cervical cancer. This is not yet used in the Netherlands, but this is planned in 2009. Because it is not yet used in the Netherlands, the effects are still unclear. Besides this it is a very expensive method which is not useful as recommendation towards Peru yet. Genetic screening is not described in this report because it can only be useful to a smaller part of the women at risk and is therefore not suitable as recommendation towards Peru.

The attendance of the screening programmes is high but not 100%. It is a goal to increase it as much as possible, but different obstacles are visible. The reasons of not participating in the programmes are more or less the same as in Peru. Reasons for not participating in breast cancer screening are fear of pain and trusting on breast self examination. There is no scientifically proof of the efficacy of breast self examination. When women can feel a lump, it is most of the time at a size which is difficult to treat. To discourage this, breast self examination is no longer a recommendation. Main reasons in the Netherlands not to participate in cervical cancer screening are fear pain, cervical cancer and of the test. An other reason is that they forget to make an appointment. Sending reminders is reducing a part of the loss of attendance. Also normative beliefs of others affect attendance; supportive relatives have a positive effect on participating. But because of the high attendance in the Netherlands, the activities of the Dutch situation might help to stimulate the Peruvian situation.

### *5.3 Recommendations*

Much health profit can be made when Peru focuses especially on cervical cancer. Most striking points at the incidence and mortality rates of the Netherlands and Peru are the differences at cervical cancer. The mortality rate is many times higher in Peru than in the Netherlands, while cervical cancer is one of the most preventable cancers! In Cusco more breast cancer patients than cervical cancer patients come to hospital EsSalud. Because both cancers have the same obstacles in case of the gender differences a recommendation would be that they have to focus on both cancers together as 'gynaecological cancers'. When focussing on improving the situation around one of the cancers, they automatically should do the same for the other type of cancer. This can be a positive element in being cost effective.

In Peru a national screening programme for both cancers should reduce incidence and mortality rates when looking at the success in the Netherlands, but this is not available in Peru. The government is trying to but till now it is not a success yet. Instead of waiting till the government solve all problems, it is possible to locally create a climate where it is easier to successfully implement a large screening programme. To do this, some main bottlenecks that hamper any prevention activity have to be overcome. Fylan (1998) provides some methods of stimulating participation of screening and reducing anxiety; provide more information, improve the quality of information, increase women's satisfaction and considers women's health beliefs.

First information as a prevention tool should be an important goal. Ignorance can be reason of many negative attitudes and beliefs towards cancer. In the Netherlands education level is high and information about breast and cervical cancer is widespread available. When this can be the case in Cusco, more women will know the purpose of screening, know that cancer can be preventable and that screening is not an evil practice but very important to save a woman's life. This information service should not only be available for women, but also for their husbands. Also in the Netherlands supportive relatives is an important predictor of participating in screening. Good, understandable information can improve several bottlenecks like fear of cancer, treatment and

prevention, negligence of symptoms and no support of the husbands. It must be understandable for the women because otherwise it will miss its purpose.

A second improvement would be to look at the healthcare provider and the location. Women feel embarrassed when being touched by a male healthcare provider. No privacy on an inappropriate examination location is not helping at all.

To implement information and a good examination location in hospital EsSalud, a special polyclinic would be appropriate. In this polyclinic women should get information about both breast and cervical cancer (knowledge / education obstacle). To overcome embarrassment a female nurse or physician, like the mammacare nurse in the Netherlands, should be the first contact for the women. This can help to overcome an aspect of the gender problem. Those nurses or physicians can make clear in an understandable way all ins and outs about cancer. They have to reassure the women and underline the importance of screening. These nurses take over some of the duties which were originally carried out by the surgeon, so it takes less time for the surgeon. The polyclinic should not only help women who are already screened (like in the Netherlands), but they should also be a screening facility as well as a treatment service. A mamma polyclinic in the Netherlands can be cost effective itself, but they could work together with other hospitals in the city to enlarge their target group and share costs, people and knowledge. Next to the information given in the polyclinic the hospital could restart making flyers at a low cost base and give them to all women in the age group at risk. Not only to women that come to the hospital for treatment, but also outside the hospital at churches, factories, schools and at the street. When this is done by already screened women this can cause a snowball effect, because knowing other screened women is also a positive predictor of participating in screening. Maybe it is useful to use other media facilities as well; with radio you will reach a lot of people in a short time with not much money. Together with a special polyclinic it could be a good step forward!



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