MAINline

METHADONE TREATMENT IN THE NETHERLANDS

Guideline implementation and client participation

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October 2016

14-7-2016

Maintenance treatment in opioid dependence

An assessment of the implementation of shared decision making principles and RIOB in daily practice

MAINline

VU

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List of abbreviations

BMT	Buprenorphine Maintenance Treatment
DT	Decide Together
HIV	Human Immunodeficiency Virus
MMT	Methadone Maintenance Treatment
POD	People with an Opioid Dependence
PUD	People Who Use Drugs
OST	Opioid Substitution Therapy
RIOB	Richtlijn Opiaatonderhoudsbehandeling
SDM	Shared Decision Making
USA	United States of America

Content

Executive summary

Background

According to a study by C.Loth (2012), six out of ten People with an Opioid Dependence (POD) in the Netherlands are socially marginalized and have problems related to criminality, antisocial behaviour, mental health and living situation. Continuing treatment and guidance are considered a necessity to improve the quality of life and reduce societal costs. A harm reduction strategy, Opioid Substitution Therapy (OST), is used to provide treatment and guidance. In this treatment, heroin is substituted by legal opioids such as methadone and buprenorphine. To create consistency in OST throughout the Netherlands, the Dutch Ministry of Health, Welfare and Sport, commissioned in 2006 the development of the Guideline for Opioid Maintenance Treatment (Richtlijn Opiaatonderhoudsbehandeling, RIOB). RIOB describes the diagnostics, adequate medication policy, several interventions and the patient's perspective for opioid maintenance treatment. To assess the implementation rate of RIOB in the Dutch addiction care institutions, Resultaten Scoren[1] conducted a study. They found an implementation rate of 100% in the institutions that participated in the research. However, this research was done by conducting telephone interviews with people high up in the organisational structure, and it was only assessed whether they were in possession of the RIOB document or knew about the document. There has never been an evaluation of the implementation of RIOB in daily practice.

RIOB also includes a conversation module based on shared decision making (SDM) to create a treatment plan. Although this module is included in RIOB, POD state that their opinion has less bearing in daily practice. For example, POD experience minimal influence on the kind of treatment they receive. Research regarding the influence of patients in decision making, showed that it would be better for treatment outcome if their opinion counted more in decision making. Thus, it is important for an increased autonomy of POD and an increased chance of successful treatment, that the needs and opinions of POD are considered and weighed in decision-making. Therefore, the aim of this study is to assess the implementation of RIOB and SDM principles for methadone and buprenorphine provision in daily practice and to give possible recommendations on both.

Two main research questions:

To what extent is RIOB implemented in daily practice in institutions for methadone and buprenorphine provision in the Netherlands and what factors influenced this?

To what extent are the principles of shared decision making in establishing a treatment plan implemented in daily practice in institutions for methadone and buprenorphine provision in the Netherlands?

Theory and concepts

To answer the first research question, two models are explained which describe guideline implementation and what cognitive steps practitioners need to take to adhere to a guideline. Relevant concepts are: the *dissemination of the guideline*, which reflects the spread of the document; the four steps in guideline adherence, namely *awareness*, *agreement*, *adoption* and *adherence*; the factors that influence these four steps, consisting of *patient characteristics, practitioner characteristics, practice characteristics* and *environmental features*. These concepts were used to develop sub-questions.

In order to assess the implementation of SDM in daily practice, the theory behind SDM is explained. Important themes that were used to develop the sub-questions consisted of three different phases of 'discussion'. First, the patient and the health care professional have a *choice talk*, where awareness is raised about the existance of choices. This is followed by an *option talk*, where a patient is informed about treatment options in more detail. Finally, there will be a *decision talk*, where the patient is supported by the health care professional to explore 'what matters most to them'. After this, a decision is made together for what is considered to be the best option.

Methods

A mix between qualitative, explorative and descriptive methods was used. A purposive sampling strategy was used to select participants. Thirteen semi-structured interviews were done. Interviews were done with respondents from eleven addiction care institutions and the public health service of Amsterdam. The interviews were recorded and transcribed verbatim. The data was analysed with a thematic analysis using MAXQDA 12. A deductive theoretical analysis was used, where key concepts from the transcribed texts were coded, based on the theoretical background and conceptual model. Furthermore, when important new information could not be assigned to existing codes, new codes were made, representing an inductive approach.

Results

Results showed that RIOB is used in every institution. However, not all of the aspects are complied with as strictly as others. A significant role in this discrepancy in guideline adherence was played by the health care inspection and which aspects they particularly verified. For example, the conversation module, based on SDM, was not used once in a single institution, while aspects like the number of medical examinations and evaluation moments were strictly followed. Furthermore, several respondents urged that the guideline should be easier to deviate from on certain aspects, as that would be beneficial for certain client groups. For example, the described medical examinations and evaluations are often considered unnecessary and redundant for stable clients. Additional criticism on the guideline by the respondents was that the described minimum of hours per discipline for every client is considered unfeasible.

Furthermore, all the respondents agreed that shared decision making should be applied as much as possible in daily practice to establish treatment plans. However, it appears that the existing treatment options that are available in addiction care are limited. Not all treatment options are open to discussion from the start of the treatment, some become options later during the treatment. For example, the influence of the client on the frequency of provision is often limited in the beginning of the treatment, because the practitioners often feel they need to see first if the clients can be trusted and see how they deal with the use of illegal drugs while on treatment. Also the choice between methadone and buprenorphine is often not available at the beginning of the treatment. In addition, in order to facilitate the understanding of the treatment, potential benefits and limitations of the treatments are discussed with the clients. But sometimes it can be difficult to make the clients understand the treatment options. Thus, one tries to put SDM into practice as much as possible, although, according to the respondents, the process is hindered by the perceived incapability of the clients to participate in it, as they are sometimes considered unstable, confused or intellectually challenged. Therefore, the practitioners act to what they think is medically responsible, thus making themselves the decision in the SDM process. What seems to be the most frequent point of discussion and friction between the client and the practitioner is the frequency of provision.

Discussion and conclusion

Concluding, as a status report, this study has identified several aspects in the SDM process and the implementation of RIOB in addiction care institutions in the Netherlands that have led to several recommendations and require further research.

This research showed that RIOB can be considered to be implemented in every institution. However, not all of the aspects are complied with as strictly as others. This is partly due to the healthcare inspection and the particular RIOB aspects that it verifies. Moreover, RIOB varies in its applicability to different target groups. Respondents mentioned that RIOB should be less compulsory on the frequency of medical examinations and evaluation moments, mostly for stable clients. In order to make it less compulsory, it must first become clear which content of the guideline is based on law, what will be checked for by the healthcare inspection, and what are mere suggestions for best practice. Only then, will practitioners be able to know where they can legally deviate from the guideline.

Furthermore, this research has shown that all of the institutions try to apply most of the SDM principles in daily practice. However, working according to all SDM principles seems difficult. There are several barriers hindering the application of SDM in addiction care. A lot of these barriers are due to the 'lack of experience' with SDM in addiction care in comparison to somatic healthcare. Training in SDM and the development of tools are considered a necessity to overcome these barriers. However, it should be kept in mind that SDM could possibly not be as successful in addiction care as in somatic care.

Recommendations

RIOB should be more distinct and clear on what is law and what is not, so that practitioners know on what aspects they can legally deviate for what the client suits best.

Practitioners should receive SDM training, because SDM communicative skills and habits take effort to learn and put into practice. Furthermore, it will enhance the consistency of care in all the institutions.

Involving clients in the multidisciplinary consultations. When clients partake in these consultations, choices that shape the treatment should be made together with the patient, and not for the patient. Clients should be able to deliver direct feedback on choices made by the practitioners, thus enhancing their involvement in the SDM process.

1. Introduction

Since the existence of human civilisation, opiates have been used for medical purposes (Dickenson, 2009). Opiates are psychoactive compounds which are naturally found in the opium plant. The ancient Greeks, for example, used opium as a pain killer. Later, when international trade and the western medicine developed, opiates were also used more commonly for recreational purposes (Bakker, 2004). In 1894 heroin, which is synthetically produced from morphine, entered the market originally as a non-addictive medicine for opium and morphine addiction as the first opioid (Bakker, 2004). However, it soon became clear that heroin is even more addictive then its precursors.

As the years progressed during the 20th century, the use of heroin worldwide increased significantly. In the Netherlands, heroin was first introduced in 1972 for recreational use and became popular fast. In 1983, the number of heroin users in the Netherlands was at its highest embodying 30.000 people. In the following years, the user population stabilised and then decreased subsequently (Blok, 2011). According to the Dutch National Drug Monitor, in 2014 there were around 12.000 people with an opioid dependence (POD) (Laar van, 2015).

Although the number of POD decreased slightly over the past decades, the problems that POD endure should not be overlooked. Six out of ten POD are socially marginalized and have problems regarding criminality, antisocial behaviour, mental health and living situation (Loth, 2012). Ongoing treatment and guidance are considered a necessity to improve the quality of life and reduce societal costs (Becker, 2008; Mattick, 2009; Mainline, 2016).

Since the seventies addiction care has been developing rapidly in the Netherlands. Harm reduction became the fundamental vision behind Dutch drug policy (Blok, 2011; Bakker, 2004). Harm reduction refers to '*policies, programmes and practices that aim to reduce the adverse health, social and economic consequences associated with the use of psychoactive drugs in people unable or unwilling to stop'* (IHRA, 2014). The primary goal of the harm reduction approach is not to withhold people who use drugs (PUD) from using drugs, but to reduce stigmatisation and improve their social and health situation. Harm reduction does not only benefits PUD, but also their families and the community due to increased social capabilities and participation (IHRA, 2014).

Opioid Substitution Therapy (OST) is one of the harm reduction strategies which is used as the main treatment for opioid dependence. In this treatment, heroin is substituted with legal opioids as methadone and buprenorphine (Becker, 2008). Empirical evidence has shown that OST reduces opioid use, the frequency of infection with HIV, criminal activity, risk of overdose and improves physical and psychological health and social functioning, including level of employment (Becker, 2008; Marsh, 1998; Lawrinson, 2008).

To create consistency in OST throughout the Netherlands, the Dutch ministry of Health, Welfare and Sport, in 2006 commissioned the development of the Guideline for Opioid Maintenance Treatment (Richtlijn Opiaatonderhoudbehandeling, RIOB). This guideline was revised in 2012 to add new treatment possibilities, such as buprenorphine and adjustments based on criticisms and evaluations from different stakeholders in addiction care. In RIOB the diagnostics, adequate medication policy and execution of several interventions for opioid maintenance treatment are described to enhance the quality of care. Another important feature of the guideline is the description of the clients' perspective and needs regarding their treatment. Although this is included in RIOB, POD state that

their opinion is weighed less heavy in daily practice. For example, POD experience minimal influence on the kind of treatment they receive (Loth, 2012).

To assess the implementation rate of RIOB in the Dutch addiction care institution, Resultaten Scoren [1] preformed a study. They found an implementation rate of 100% in the institutions who participated in the research (Spits, 2012). However, this research was done by conducting interviews by telephone with people high in the organisational structure, so it was only observed whether they were in possession of the document or knew about the document. No insight was given in the implementation rate of actual practice in addiction care institutions. It is likely that the high rate reflects the distribution of the document rather than the use of RIOB in actual practice.

Moreover, In RIOB, a conversation module is included that enhances sharing of decision-making and is known as 'Decide Together' (DT) (Samen Beslissen) (Loth, 2012; Joosten, 2009). This module has been specifically made for addiction and mental health care for coming to a treatment agreement based on shared interests (Joosten, 2009). When this module or any other method based on the same principles are integrated properly in daily practice in OST, complaints such as limited influence on treatment options should be solved. As previously mentioned, no insight was given in the implementation of RIOB in actual practice, meaning that no insight was given whether DT, based on shared decision making (SDM), was implemented in actual practice.

Research regarding the influence of patients in decision making, showed that it would be better if their opinion was weighed more heavily in decision making. It showed that when patients and care providers have a mutual relationship, characterized by a sharing of decision-making, treatment is most likely to be successful (Edwards, 2009). Such a relationship enhances empowerment, self-determination and their sense of worthiness (Emanuel, 1992). Furthermore, Rogers (2002) stated that everybody has the moral right to participate in decisions that affect them. (Rogers, 2002).

Concluding, there has never been evaluation of the implementation of RIOB in daily practice, which also includes a SDM method to make a treatment plan. In addition, for an increased autonomy for POD and an increased chance for successful treatment, it is important the needs and opinions of POD are considered and weighed in decision making. There has never been an evaluation to what extent SDM principles are implemented in daily practice. Therefore, the aims of this study are to assess the implementation of RIOB and SDM principles in establishing a treatment plan for methadone and buprenorphine provision in daily practice in the Netherlands to give a better insight in daily practice, which can lead to possible recommendations.

This research is guided by two main research questions:

To what extent is RIOB implemented in daily practice in institutions for methadone and buprenorphine provision in the Netherlands and what factors influenced this?

To what extent are the principles of shared decision making in establishing a treatment plan implemented in daily practice in institutions for methadone and buprenorphine provision in the Netherlands?

[1] Resultaten Scoren is a Dutch organisation that wants to enhance the application of the available knowledge in prevention, treatment and care in addiction.

2. Contextual Background

In the following chapter several topics will be discussed further to provide a wider context and a better understanding of the relevant subjects. These subjects include opioids and POD, harm reduction and other drug policies, OST with methadone and buprenorphine, guidelines and RIOB and Mainline as an organisation.

2.1 Opioids and POD

Opiates are a group of psychoactive substances which are derived from the plant *Papaver somniferum*, also known as the poppy plant. Naturally found substances are morphine, codeine, thebaine and opium. Opiates are part of a bigger group called opioids, which also represents semi-synthetic opioids derived from morphine, such as heroin, and synthetic opioids, such as methadone and buprenorphine. All opioids are strong drugs that were used for primarily medical ends to induce an increased tolerance of pain. Recreational use followed later (Connock, 2007).

2.1.1 Associated harms

As the use of opioids increased over the years, it became clear the use of opioids also had negative effects. The harm associated with drug use was described by Nutt (2007) as: '*there are three main factors that together determine the harm associated with any drug of potential abuse: the physical harm to the individual user caused by the drug; the tendency of the drug to induce dependence; and the effect of drug use on families, communities, and society*' (Nutt, 2007). What causes physical harm when using drugs is dependent on the route of administration. When heroin is taken through the respiratory route it can cause severe damage to the respiratory system. When heroin is administered by injection this can lead to abscesses, damaged veins and the spread of blood-borne viruses such as hepatitis C and HIV (Nutt, 2007). Other common reported problems are sleeping disorders, weight loss and pain to the chest (Connock, 2007). Furthermore, opioids have a high tendency to induce dependence. This can be divided in psychological dependence and physical dependence. Most of the dependence is driven by physical dependence involving increased tolerance, intense craving and withdrawal reactions, such as tremors, diarrhoea, sleeplessness and sometimes even death. Psychological dependence is more emotional driven (Nutt, 2007). As stated by Connock (2007): '*The nature of the opioid withdrawal syndrome and the associated psychological craving for the drug may mean that the need to obtain supplies takes precedence over all other priorities'.* This may lead to damaging the person's social life, family and lost productivity or unemployment. Furthermore, societal systems as the justice department and the health care system perceive increased pressure and costs (Connock, 2007; Nutt, 2007). The criteria to be diagnosed with an opioid dependence are further explained in textbox 1.

2.1.2 Demography of POD

The amount of POD that were estimated in 2012 was around 15.6 million globally, 11 million of whom were dependent on heroin (Nielsen, 2012). According to the Dutch Drug Monitor in 2011, the amount of POD was estimated around 17.000 in the Netherlands (Loth, 2012). LADIS [2] recorded 9.600 POD in 2014, however this reflects only the people who are registered in addiction care and receive treatment (Wisselink, 2015). In the last decade a trend is observed which reflects a decrease in users over time. The amount of 'new users' is very low, namely 5%. As a result, the average age of

[2] LADIS is a Dutch organisation that collects information about national alcohol and drug use.

POD is slowly rising and is at this moment considerably high, almost 50 years. The division of men under the users is 80%. 66% of the registered users also use other drugs, mostly cocaine. Almost 80% of the POD within the addiction care are registered to a methadone program (Wisselink, 2015).

Textbox 1. Criteria by DSM (V) to diagnose an opioid dependence

According to the Diagnostics and Statistical Manual of Mental Disorder (DSM), opioid dependence is diagnosed when at least two of the following points are met in the same 12-month period (American Psychiatric Association, 2013; Hasin, 2013):

- Taking the substance in larger amounts or for longer than the you meant to.
- Wanting to cut down or stop using the substance but not managing to.
- Much time spent getting, using or recovering from the use of the substance.
- Craving, or a strong desire or urge to use opioids.
- Continuing to use, even when the you know you have a physical or psychological problem that could have been caused or made worse by the substance.
- Important social, occupational, or recreational activities are given up or reduced because of opioid use.
- Recurrent opioid use resulting in a failure to fulfil major role obligations at work, school, or home.
- Repeated failed attempts to quit or control the use of the substance.
- Recurrent opioid use in situations in which it is physically hazardous.
- Tolerance towards the substance.
- Development of withdrawal symptoms.

2.2 Drug policies, strategies and approaches

There are different policies, strategies and approaches that aim to deal with drug use. These can be differentiated into three main movements; supply-reduction strategies, demand-reduction strategies and the harm-reduction approach (Marlat, 2010; Weatherburn, 2009).

2.2.1 Supply reduction

Supply reduction strategies, also known as the 'war on drugs', are aimed at the reduction of illicit drugs available on the market. It involves the interception of drug trafficking by trying to eradicate illicit crops, drug laboratories, drug-trafficking organisations and street dealers (Marlat, 2010). Evidence showed that demand for drugs such as heroin and cocaine is price-sensitive (Petrie, 2001). However, especially in the United States of America (USA) where the 'war on drugs' is at it 'hottest', it seems that this strategy is not working according to its purpose. The harms associated with this strategy include loss of civil liberty, increased risk of overdose and disease and increased rates of imprisonment (Marlet, 2010; Weatherburn, 2009). The latter is most visible in the USA, where a total of 2.3 million people were imprisoned in 2009 compared to 500.000 in 1980. More than half of those were based on drug offenses, such as trafficking, possession and smuggling (Carter, 2011; Yeh, 2015). Evidence showed that imprisonment significantly reduces an individual's chance on future employment and earning prospects. This strategy is recognized as unsuccessful by Nobel Peace Prize Winner Jimmy Carter and change towards a more humane and effective strategy like demand- and harm reduction is desirable (Carter, 2011; Marlet, 2010; Weatherburn, 2009). As American criminologist and sociologist Willian Chambliss once stated: '*The war on drugs is a failure by any objective measure. It has not reduced drug consumption, the prevalence of drug-selling gangs, the production of new products for consumers, or the volume of drugs flowing into the United States. It has been successful, however, in legitimating the creation of a virtual police state in the ghettoes of our cities'* (Buchanan, 2000).

2.2.2 Demand reduction

Another strategy to decrease the amount of drugs used is the demand-reduction strategy. It includes several strategies such as awareness campaigns, preventive interventions, community social services and support for families. As it mainly focuses on prevention and minimisation of drug use, demand-reduction practices have been evaluated as successful (Marlet, 2009). One of the best ways to reduce demand for heroin is to provide POD with methadone maintenance treatment (MMT), which will be further elaborated upon in the paragraph 'Opioid Substitution Therapy' (Weatherburn, 2009). This treatment is one of the OSTs, which overlaps with the harm-reduction approach. The demand-reduction approach and the harm-reduction approach overlap, but where demand reduction is more aimed at the prevention, harm reduction is more aimed at the reducing the harm of people who already use drugs (MacCoun, 1998).

2.2.3 Harm reduction

The harm-reduction approach aims '*to reduce the adverse health, social and economic consequences associated with the use of psychoactive drugs in people unable or unwilling to stop'* (IHRA, 2014). This is done by giving people tools and information which help with harm reduction, such as teaching self-control and improvement of self-image (Mainline, 2016). By meeting and working with PUD, harmful effects of a specific behaviour are minimized. To achieve this, harm-reduction interventions are often specified to an individual, resulting in very personalized care (Marlat, 2010). With personalized care the opinion of PUD is more likely to be taken into consideration, which can enhance empowerment and self-determination of PUD. According to Mainline, this is an important part of harm reduction: *'if you believe in yourself, you are less likely to seek refuge in substance use'* (Mainline, 2016). When PUD commit to a certain treatment, such as OST, it is important that it starts with the patient's needs and goals and that any positive change in behaviour is emphasised so the individuals recognize their own ability to change their behaviour (Marlat, 2010). The principles of harm reduction are derived from pragmatism, humanism and the recognition that harmful drugs will always be a part of society (Marlat, 2010). Furthermore, it is also in line with the human rights approach, since everybody should have the highest attainable standard of health, which includes the right to obtain health services without fear of judgement and punishment (United Nations, 1948). According to Mainline, criminalisation, stigma, discrimination and marginalisation do often more harm to PUD then the drugs itself (Mainline, 2016). Harm reduction aims to reduce this. Accepting harm reduction as a strategy or policy to be implemented relies on developing acceptance from society towards PUD (Marlat, 2010). Common harm-reduction strategies which help PUD in different ways are given in textbox 2. For the sake of this study, OST will be further elaborated, since OST is most often used for POD.

Textbox 2. Common harm-reduction strategies

- Needle and syringe programs (NSPs)
- Opioid Substitution Therapy (OST)
- HIV testing and counselling (HTC)
- Prevention and treatment of sexually transmitted infections (STIs)
- Targeted information, education and communication (IEC) for people who inject drugs and their sexual partners

2.3 Opioid Substitution Therapy

OST is the treatment where the opioid which POD use is replaced with methadone, buprenorphine or in some cases other substitution opioids. Since 2005 methadone and buprenorphine have been included in the Model List of Essential Medicines (World Health Organisation, 2005). Since these substitution opioids are most common and most important, this study is focused at the provision of methadone and buprenorphine. One of the first definitions of an opioid dependence was given by Dole; *'a physiological disease characterised by a permanent metabolic deficiency'.* To compensate this deficiency, it was thought best to do so by administering methadone (Dole, 1965). Although this point of view towards an opioid dependence is outdated, it resulted in the first orally-administered substitution treatment to treat an opioid dependence which we now still use today (Mattick, 2009).

OST is often designed to be an ongoing treatment. In this way better guidance can be provided, since most POD have to come back on a daily basis to get their substitution opioid. Over the years OST proved itself successful and was implemented in numerous countries (Mattick, 2009). The treatment is able to reduce withdrawal, craving, obtaining illegal opioids and the use of needles (Mattick, 2009). It is important to take note that not only the substitution opioid is the cause of improvement. By replacing the illegal opioid with a legal opioid, the context of the lives of POD changes. For example, their activity in the criminal environment, where illegal opioids are often associated with, decreases substantial. Due to this substitution, POD are bound to a medical system. In this way their behaviour can be monitored and guided to change, and if possible, abstinence can be achieved (Mattick, 2009; Connock, 2007).

2.3.1 Methadone

Methadone is the most widely used substitution opioid in the world to treat opioid dependence and was first produced during the second World War by the Germans as an alternative for morphine (Bakker, 2004). In the early '60's it was first used to treat opioid dependence. Methadone is a synthetic full opioid receptor agonist [3] which can be administered orally (Mattick, 2009). Orally administered opioids avoid damaging veins, abscesses, damage to the respiratory system and infections by needles (Nutt, 2007). Treatment including methadone is called Methadone Maintenance Treatment (MMT). Despite the many advantageous effects of MTT, there are some negative effects. Since methadone is a full opioid receptor agonist there is no limit of the effects it can induce. As a result, methadone overdose can be fatal (Ward, 1999; Mattick, 2009). Therefore, close monitoring of POD is important, especially in the beginning of the treatment. Furthermore, methadone needs to be taken on daily basis and POD describe that detoxification of methadone is hard and difficult (Loth, 2012). Despite the correct dosing, methadone is not the best option for all POD, so two alternatives are available in RIOB; medical heroin and buprenorphine. Since medical heroin has different protocols than methadone and buprenorphine, medical heroin is excluded from this study.

[3] An agonist binds to a receptor and activates the receptor to produce the corresponding biological response. A full agonist has a high affinity to bind to a receptor, producing a high stimulant at that receptor.

2.3.2 Buprenorphine

Buprenorphine is partially an opioid agonist and partially an antagonist [4]. It is considered a milder, less euphoric and less sedating opioid in comparison with heroin or methadone (Connock, 2007). Buprenorphine can be administered orally as well, providing the same benefits as methadone. Treatment including buprenorphine is called Buprenorphine Maintenance Treatment (BMT). while MMT seems slightly more effective in treatment than BMT, BMT does show other advantages. It can be administered to POD who are not qualified for MMT. This is, for example, when POD are experiencing unwanted side-effects due to methadone. (Loth, 2012). Furthermore, buprenorphine has a better safety profile than methadone, daily intake is not necessary and the overall intensity of withdrawal symptoms are less intense than methadone (Ling, 1996; Connock, 2007). However, POD in MMT can only switch to buprenorphine when the dosage of methadone is low; around 30 mg or less. Buprenorphine is relatively new and almost all POD in the Netherlands are in MMT, with an average dose of 78mg (Wisselink, 2015). The transition from methadone to buprenorphine is considered difficult (Loth, 2012). Besides that, not all POD want to receive buprenorphine, since it does not induce the high sedative effect as methadone and heroin do.

Methadone and buprenorphine both prove efficacious. However, OST is more than providing substitution opioids. Also guidance and social interaction are part of OST and are considered as important for recovery to participate in society again.

2.4 Guidelines and RIOB

RIOB is the Dutch guideline for opioid maintenance treatment. It was commissioned by the Dutch ministry of Health, Welfare and Sports in 2006 to create constancy regarding OST throughout the whole country.

2.4.1 Guidelines in general

Over the past decades the use of guidelines has been increasingly common in clinical practice. According to the Institute of Medicine, clinical guidelines are '*systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances*' (Marilyn, 1990). They form a bridge between evidence-based research and actual practice (Rogers, 2002). They often provide diagnostics, adequate medical policy, executions of certain interventions or any other essential information (Woolf, 1999). Interest in guidelines has increased over the past decades due to several reasons. Some of these are an increase in health care costs, more expensive and complicated technologies and a more demanding public where a high standard and decrease in unwanted variations is wanted (Natsch, 2003). As a result, clinical guidelines tend to be 'quality-enhancing' or 'cost-reducing'. This is usually a trade-off, where often priority is given to the latter. Guidelines have both benefits and limitations (Woolf, 1999; Rosoff, 1995).

[4] An antagonist blocks the biological response of the receptor. Partial agonist and antagonists only have partial efficacy at the receptor, as a result it induces a minor sedating effect and prevents heroin to have an effect.

2.4.1.1 Benefits

Some benefits that guidelines have for patients is that it improves the consistency of care, by offering the healthcare professionals recommendations in how to proceed (Woolf, 1999). Furthermore, guidelines call attention to certain groups, such as high risk groups and decreases possible discrimination to receive equal treatment. Another benefit is that guidelines often provide a summary of the potential benefits and harms. This summary enhances the patient's ability to make an informed choice. For healthcare systems, guidelines often result in structural and efficiency benefits, which leads to cost-effectiveness (Woolf, 1999; Rosoff, 1995).

2.4.1.2 Limitations

Despite guidelines have many benefits, guidelines can also be wrong (Woolf, 1999). Scientific evidence, that the guidelines are based on, can be incomplete, misinterpreted or false. Studies often lack generalisability because of design flaws. Moreover, patients may not be the first goal of the guideline. Cost-effectiveness can damage the quality of care and that could be dangerous and harmful (Woolf, 1999). Patients are most at risk when there are flaws in guidelines. Furthermore, what is best for the majority of the group can be harmful to certain individuals. Therefore, guidelines should be made and followed with great thought and care (Woolf, 1999; Rosoff, 1995).

2.4.1.3 Guideline implementation

Guideline success or failure is multifactorial (Brand, 2005). One of these factors that can influence the success of a guideline is the implementation of guidelines. Guideline implementation is not a guaranteed success. While the development of guidelines increased significantly, many are often not used after dissemination. Furthermore, after implementation only moderate improvement is often observed. Thus, it still seems hard to transfer scientific evidence into daily practice (Grol, 2001).

2.4.2 RIOB

RIOB is divided into different chapters; general information, the patient's perspective, comorbidity of drug use, diagnostics, organisation of the institution and information about opioid substitution medication.

According to RIOB, general addiction care is focused on three important objectives. The first objective is to identify the functions of drug use, the second objective is to develop alternatives for drug use and prevention of relapse is considered third (Loth, 2012). RIOB objectives include crisis-intervention and stabilisation. Crisis-intervention is simply focused on treatment which embodies direct survival by means of cardiopulmonary resuscitation (CPR) and follow-up interventions. Stabilisation can be separated into three variants (Loth, 2012):

- Stabilisation by reducing or ceasing the use of illicit drugs by providing substitute substances as methadone or buprenorphine, often with a high dosage.
- Stabilisation by ceasing the use of illicit drugs by providing medical heroin for chronic addicted POD who have insufficient benefit from treatment with methadone or buprenorphine.
- Stabilisation by reducing the use of illicit drugs by providing low dosage of methadone or buprenorphine and continuity care to stay in contact with POD.

2.4.2.1 Patient's perspective

In the RIOB a whole chapter is dedicated to the people in treatment. In this chapter, aspects of what they would like or need are described. This includes their perspective on the relationship with the practitioner, how they are treated and the amount of influence on treatment they have. POD find it important that practitioners give attention to their opinion about the dosage and what kind of medicine and guidance they would want to receive. However, POD state in the RIOB they often perceive limitations regarding these subjects (Loth, 2012). To overcome these limitations, Joosten (2009) developed the conversation module DT to create a standardized method to come to a treatment agreement between patients and care givers in addiction and mental health care, based on the principles of Shared Decision Making (SDM) (Joosten, 2014). In RIOB a summary of this conversation module is added.

2.5 Shared Decision Making

SDM can be seen as a process to decrease the imbalance of information and power between physicians and patients. This is done by increasing the patient's autonomy and control over treatments that affect their well-being (Charles, 1997). The increased interest in SDM can be explained by the principle 'informed choice', which is more commonly demanded. Furthermore, the transition from acute care to chronic care plays a substantial role. Patients want to have a part in decision making if the decision has long-term effects (Charles, 1997). SDM is often used in somatic healthcare, where the patient can choose together with the doctor between a various number of more or less equally effective treatments. But in addiction and mental health care, SDM was barely investigated (Joosten, 2014). Furthermore, the variety of options patients in addiction care and mental health care have, are often very limited. However, as well as in somatic healthcare, autonomy and active involvement in decision making are wanted in addiction care by POD (Loth, 2012).

2.6 Mainline

Mainline is an independent foundation in the Netherlands which is dedicated to improve health and quality of life of drug users. For 25 years Mainline has been, among other things, providing education on drug use and training to service providers. Some of their goals are to improve the quality of life and the reduction of infectious diseases, increasing self-reliance and self-esteem, eliminate stigma associated with drug use and to promote human rights for drugs users. RIOB is considered important for Mainline, since almost all of POD's lives are affected by it daily. It is important to know what the perspectives are on RIOB and what are perceived barriers. Furthermore, since RIOB includes a SDM module for making a treatment plan, it is in Mainline's interest to know in what level this module, or any SDM module, is implemented in daily practice. SDM enhances client participation, which also enhances self-reliance and self-esteem. These are important aspects that Mainline would like to see improve for POD.

3. Theoretical background

The following chapter will describe the theories behind the relevant themes in order to develop sub-questions to answer the main research questions. To answer the first question, it must be understood what steps need to be taken in the development and implementation of clinical practice guidelines. Secondly, theories that describe guideline adherence by physicians are discussed. Subsequently, a conceptual framework is presented to summarize the important concepts based on guideline implementation and adherence. Third, the theory of SDM will be explained to identify relevant themes in order to answer the second research question. At the end of the chapter, sub-questions for each research question are presented.

3.1 Guideline implementation

There are many studies done to research the dissemination and implementation of guidelines (Moulding, 1999; Kitson, 1998). Many of these studies focus on frameworks and theories to explain the forces and factors that are important in behavioural change for physicians to adhere to a guideline (Moulding, 1999; Firth-Cozens, 1997; Grol, 1992; Pathman, 1996;). Firstly, to provide a wider picture of guideline development and implementation, a model will be explained that embodies the whole process (Davis, 1997). This model can be found in figure 1. Another model developed by Kitson (1998), describes the same process in practically the same way. The same concepts are used, but are visualized differently (Kitson, 1998). To make a choice between the two models, the model from Davis (1997) provides an easier framework where other models can be attached to. Therefore, this model is chosen. It visually shows best the whole process from development to implementation and explores the theoretical aspects of how, why and in what circumstances health care professionals adopt new information and change their practices (Davis, 1997).

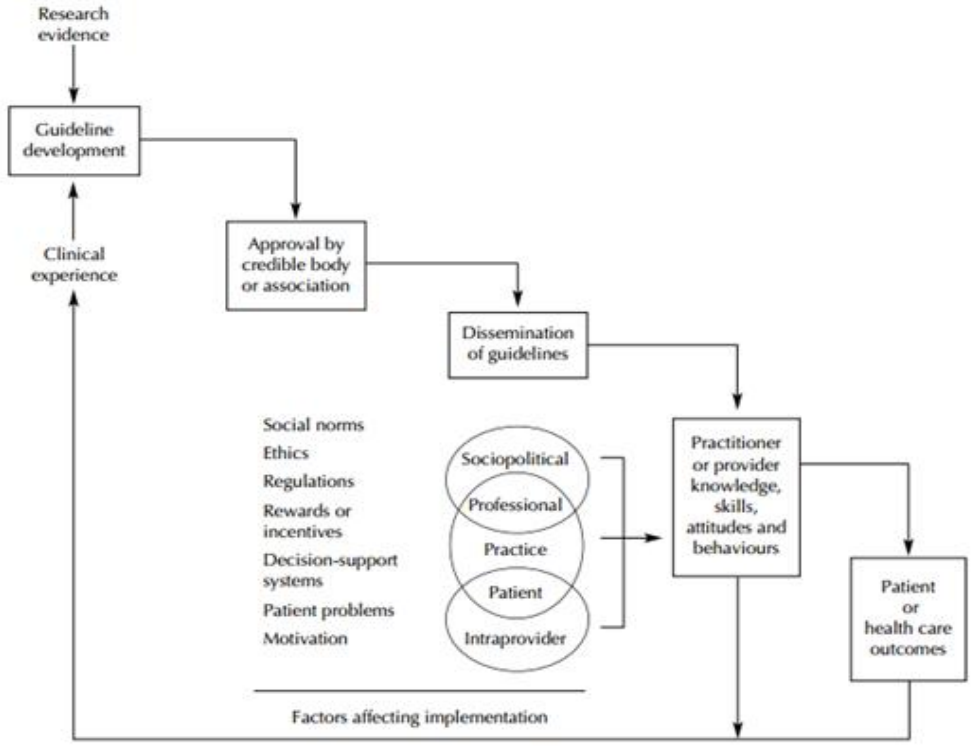

Figure 1. The steps in the development and implementation of clinical practice guidelines, and factors influencing the adoption of guidelines (Davis, 1997).

This model can be divided into two stages; primary dissemination and secondary implementation. Guidelines are always based on research evidence and clinical experience. This forms the basis of *guideline development*. Subsequently, when the guideline is developed, it has to be *approved by a credible body or association.* According to Davis (1997), it is relatively unclear in practice who should develop the guidelines and who should approve it. How secondary implementation works is much more apparent than who should develop the guidelines and who should approve it (Davis, 1997). The *dissemination of guidelines* is the process where the guidelines are distributed and made available to as many health care professionals as possible. All the previous steps embody stage one, or primary dissemination. The second stage, secondary implementation, encompasses the *practitioner's knowledge, skills, attitudes and behaviours* about, of and towards the guideline and *patient or health care outcomes*. The practitioner's knowledge, skills, attitudes and behaviours are influenced by a various number of factors. In the model these factors are divided into three overlapping groups, which are derived from a study done by Fox, Mazmanian and Putnam (Fox, 1989). As Davis (1997) describes it: '*The circles represent large social and political forces such as group norms and professional regulations, environmental considerations such as practice location, demographics, setting and patient issues, and intraprovider issues such as motivation, age and attitudes.'* Consequently, this process will have influence on the *patient or health care outcome* depending on the level of compliance by the physician. The last two steps provide clinical experience and patient experience about the content and application of the guideline. This experience can be used to help develop new guidelines or adjust the existing one (Davis, 1997). This model describes the whole process of guideline development to implementation and outcome, but it is not all equally relevant for this study. As this study is trying to assess the implementation of RIOB, it is important to gain insight in how the dissemination of the guideline occurred and what the view and opinion of the practitioners on the guideline is. Therefore, the steps which are considered relevant are *dissemination of guidelines* and *practitioner's knowledge, skills, attitudes and behaviours.*

3.2 Guideline adherence

As the model described above gives an oversight of the whole process and factors that influence adherence, it does not tell what steps physicians need to follow to adhere to a guideline. To provide a further understanding of what steps physicians need to make to comply with a guideline, another model is presented in figure 2. As described earlier, there are many models that focus on the forces and factors that are important in behavioural change for physicians to adhere to a guideline. Firth-Cozens (1997) describes such a model, however it rather focuses on factors that drive or hinder that behavioural change instead of the steps that physicians go through to comply with a guideline (Firth-Cozens, 1997). Grol (1992) describes practically the same 4-step process of compliance as the model by Pathman (1996) presented in figure 2, but the latter is chosen since it also includes factors that facilitate or hinder the process.

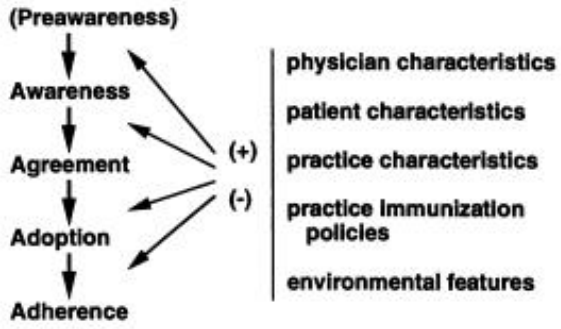

Figure 2. 'The awareness-to-adherence model'. Model of cognitive steps physicians make in adhering to clinical guidelines, and types of factors that facilitate of hinder movement along these steps (Pathman, 1996).

This model describes the sequence of cognitive steps which physicians make to comply to a guideline. All of these steps can be facilitated or hindered by factors given at the right side of the model. The first step for physicians, who in the beginning are *unaware* of the guideline, is to become *aware* of the guideline. Subsequently, the physicians must intellectually *agree* with the guideline. Then they must decide to *adopt* the guideline in their practice. Where finally the physicians must succeed to *adhere* to the guideline at the right times (Pathman, 1996). For different reasons, the physicians can stop at any of the four steps in the road to adherence. Stopping at any point in the sequence leads in non-compliance with the guideline. This model provides researchers and other interested parties in guideline-compliance insight of what happened when physicians deviate from guidelines (Pathman, 1996). For this study, the whole model will be used, including the factors that hinder or facilitate the process. Only the factor *policy immunization process* will be excluded, since it is not relevant for this study.

3.3 Conceptual framework

The conceptual framework is presented in figure 4 to summarize the important concepts from Davis (1997) and Pathman (1996) to be able to develop sub-questions and to help answering the first research question regarding the implementation of RIOB.

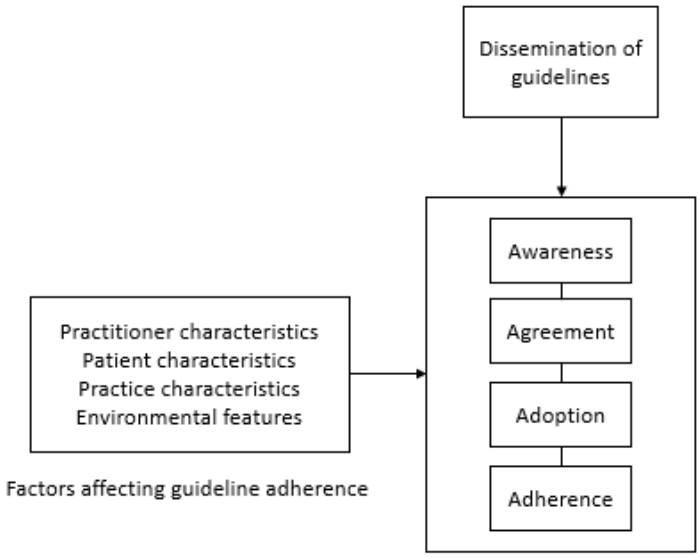

Figure 4. Conceptual model on RIOB implementation adapted from Davis (1997) and Pathman (1996).

3.3.1 Justification

As mentioned before, the first two steps from the implementation model from Davis (1997) are excluded, since those are not considered relevant to our study. The *dissemination of guidelines* is used as the starting point, since this is the first moment where practitioners come in touch with the guideline. The step in the model from Davis (1997), *practitioner's knowledge, skills, attitudes and behaviours,* is replaced with the *awareness-to-adherence* model. This model embodies the *knowledge (awareness & agreement), attitudes (agreement)* and *behaviours* (*adoption & adherence)* towards the guideline. *Skills* is excluded, since this study does not want to assess the level of skill of the practitioner, nor are we capable of assessing such. Factors affecting guideline adherence used in this model are the same as in the original model from Pathman (1996). Only *'physician'* is replaced with *'practitioner',* since that is the correct designation in this study. As mentioned before, *policy immunization process* is excluded since this is not considered relevant for this study. The *awareness-to-adherence* model is used to indicate the level of compliance of the practitioner. The final step in the implementation model from Davis (1997), *patient or health care outcome,* is also excluded since this study merely focuses on the implementation of the guideline.

3.4 Shared decision making

As described in the contextual background, RIOB includes a conversation module based on the principles of SDM. To summarize the core principles of SDM, Elwyn (2012) stated: '*SDM rests on accepting that individual self-determination is a desirable goal and that clinicians need to support patients to achieve this goal, wherever feasible'* and *'SDM recognizes the need to support autonomy by building good relationships, respecting both individual competence and interdependence on others'* (Elwyn, 2012). Although the name 'shared decision making' clearly insinuates how the decision is made, there has been no clear model or definition of the term. Different models have been made that describe a variety in the distribution of responsibility between physician and patient (Makoul, 2006). Elwyn et al (2012), tried to translate existing conceptual descriptions into a simplified three-step model which embodies the core principles of SDM given in figure 3 (Elwyn et al, 2012).

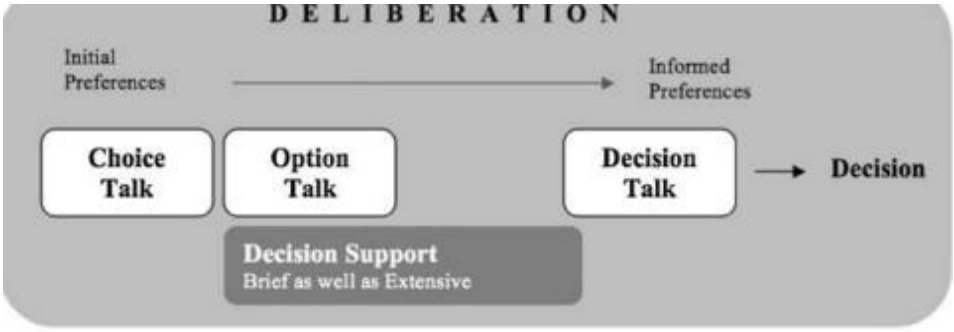

Figure 3. A shared decision making model (Elwyn et al, 2012).

This model describes the process *deliberation*. This process emcompasses the collaboration between health care professionals and patients. In this process, according to Makoul, '*the professionals and patients bring knowledge, concern and perspectives of each to the process of seeking an agreement on a course of treatment* (Makoul, 2006). Eventually, it is the goal that patients become aware of their options, understand their options and decide what is best for them. This is tried to be accomplished after three different phases of 'talk' between the practitioners and the patient. In the beginning, the patients come to the physician with *initial preferences* to choose from known treatment options, based on existing knowledge. The goal is to get *informed preferences,* based on an understanding of the most relevant benefits and harms. To come to that stage, the patient and the health care professional first have a *choice talk*, where awareness is raised that a choise exists. This is followed by *option talk*, where a patient is informed about treatment options in more detail. Finally, there will be a *decision talk*, where the patient is supported by the health care professional to explore 'what matters most to them'. After this, a decision is made together for what is considered the best option (Elwyn, 2012). This model describes the core principles of SDM. As this study tries to assess those core principles in daily practice in addiction care, this model will be used to answer the second main research question. The different phases of 'talk' will be considered as the important themes, since those are the 'actions' in a SDM process which are assessable and most important. Since the focus of this study is on the perspective of the practitioners, *Initial preferences* and *informed preferences* of the clients are excluded from this study.

3.5 Sub questions

The sub-questions to answer the main research questions are given below. The sub-questions of the first research question are based on the conceptual framework derived from literature of Davis (1997) and Pathman (1996). The sub-questions of the second research question are based on relevant concepts of the model described by Elwyn (2012).

To what extent is RIOB implemented in daily practice in institutions for methadone and buprenorphine provision in the Netherlands and what factors influenced this?

- How did the dissemination of RIOB took place in methadone and buprenorphine provision institutions in the Netherlands?
- To what extent are the practitioners in methadone and buprenorphine provision institutions in the Netherlands aware of RIOB?
- To what extent do the practitioners in methadone and buprenorphine provision institutions in the Netherlands agree with RIOB?
- To what extent do the practitioners in methadone and buprenorphine provision institutions in the Netherlands adopt RIOB in their practice?
- To what extent do the practitioners in methadone and buprenorphine provision institutions in the Netherlands adhere to the RIOB at all times?
- Which practitioner's characteristics influenced the practitioners in methadone and buprenorphine provision institutions in the Netherlands to adhere to RIOB?
- Which patient's characteristics influenced the practitioners in methadone and buprenorphine provision institutions in the Netherlands to adhere to RIOB?
- Which practice characteristics influenced the practitioners in methadone and buprenorphine provision institutions in the Netherlands to adhere to RIOB?
- What environmental factors influenced the practitioners in methadone and buprenorphine provision institutions in the Netherlands to adhere to RIOB?

To what extent are the principles of shared decision making in establishing a treatment plan implemented in daily practice in institutions for methadone and buprenorphine provision in the Netherlands?

- To what extent does 'choice talk' come forward in the decision making process in methadone and buprenorphine provision institutions in the Netherlands?
- To what extent does 'option talk' come forward in the decision making process in methadone and buprenorphine provision institutions in the Netherlands?
- To what extent does 'decision talk' come forward in the decision making process in methadone and buprenorphine provision institutions in the Netherlands?

4. Methodology

4.1 Research design

In this study a qualitative design was chosen, which was both descriptive and explorative. A descriptive method is suited to answer the questions 'what' and 'how', whereas the explorative part of the design is suited to answer the question 'why' (Grey, 2014). A qualitative research design with semi-structured interviews with practitioners was chosen to provide an in depth insight into the current situation of methadone and buprenorphine provision in the Netherlands.

4.2 Sampling Strategies

For recruiting, a purposive sampling strategy was used to select participants. This gave the ability to select participants from the population based on particular characteristics that were of interest (Grey, 2014). Based on these characteristics the participants were able to provide important information into the current situation of methadone and buprenorphine provision. Mainline's (in)direct network was used to search for suitable participants from these institutions. When contact was made and participants were not able to participate, participants were asked for a feral to a suitable colleague. Participation in this study was voluntary and anonymous. Before the start of the study, the participants received information about the content and objective of the study. After reading this information and agreeing to participate, the participants were considered informed and it was not necessary to sign an informed consent.

4.3 Study setting and participants

To provide a broad insight into the current situation of methadone and buprenorphine provision in the Netherlands, all of the provision institutions in the Netherlands and the GGD (Public Health Service) of Amsterdam were approached for this study. A list of the institutions which participated is given in table 1. Nurses, treatment supervisors and doctors specialised in addiction whom are involved in the process of establishing a treatment plan were interviewed. From each institution one of these health care professional was interviewed to give insight into the use SDM principles and the implementation of RIOB. When a participant was unable to provide sufficient information, another participant from the same institution was interviewed to complement the missing information. This led to a total of 13 interviews.

Institution	**Location**
Victas	Utrecht
Verslavingszorg Noord-Nederland	Groningen, Friesland, Drenthe
Tactus Verslavingszorg	Overijsel
IrisZorg	Gelderland
Emergis	Zeeland
Mondriaan Zorggroep	Zuid-Limburg
Vincent van Gogh	Noord- en Midden Limburg
Arkin/Jellinek	Amsterdam en Het Gooi
GGD	Amsterdam
Novadic-Kentron	Noord-Brabant
Brijder Verslavingszorg	Noord- en Zuid-Holland
Bouman GGZ	Zuid-Holland

Table 1. List of the institutions

participating in this research.

4.4 Data collection

Semi-structured face-to-face interviews were conducted with the selected participants. This method enables the possibility to cover the topics of interest and to delve deeper into certain topics when further understanding is needed (Grey, 2014). An interview guide was made in advance, which included questions based on the conceptual model to be able to answer the sub-questions. The use of an interview guide promotes the consistency during interviews and increases reliability of the findings (Grey, 2014). A pilot interview was conducted to evaluate feasibility, time and effect size. (Hulley, 2013). This eventually led to minor adjustments in the interview guide. The interview consisted of three different phases; the opening, middle-part and closing. In the first phase the participants were explained about the procedures and topics of interest. Subsequently, in the middle-part, the participants were asked questions. Finally, at the closing of the interview, the participants had the opportunity to add information, ask questions or reflect on the interview. All the participants were asked for permission to tape record the interview and informed that the results would be anonymous. The interviews were conducted in Dutch and took approximately 45 minutes. The interviews took place at the institution between the end of March and the end of May 2016.

4.5 Data analysis

After conducting the interviews, they were transcribed verbatim by using the program 'Express Scribe'. The data were analysed by using thematic analysis (Braun & Clarke, 2006). Thematic analysis focuses on identifiable themes and patterns derived from the data (Aronson, 1995). A deductive theoretical analysis was used, where key concepts from the transcribed texts were coded bases on the conceptual model. To increase the diversity of the coded data, sub-codes where made for every coded theme concept. Furthermore, when important new information could not be assigned to existing codes, new codes were made, representing an inductive approach. First, codes were made based on core concepts formulated in the sub-questions. Subsequently, the transcribed texts were analysed and sub-codes were made about what the participants had to say about the core concept. Finally, when every coded segment was subdivided, they were checked if they were in the correct placement and reassigned if considered necessary. The qualitative data analysis software program MAXQDA 12 was used to analyse the data.

5. Results

In this section the results are presented to answer the sub-questions. First, the findings about the implementation of RIOB and the factors that influenced the implementation process of RIOB are presented. Second, results regarding the shared decision making process are revealed.

5.1 Guideline implementation

The next section will discuss the dissemination of RIOB, the level of agreement towards the guideline and to what extent it is adopted in the practice of the practitioners. The last paragraph will discuss the factors that influenced the guideline adherence.

5.1.1 Dissemination

The dissemination of the guideline refers to the spread of the document. All of the respondents mentioned they were in possession of the document. How they became in possession and familiar with the document differed. Some institutions put effort in spreading the guideline and its content by giving presentations, trainings or workshops.

> *'We have had two or three meetings where we have been preparing a workshop for everybody who has to work with RIOB within 'care intensity 4' (P4)*

Some of the respondents mentioned that the institutions did not put much effort in making the respondents aware of the content. It was expected that you got familiar with the content and eventually knew it by yourself. They claimed that they got familiar with it by just working with it.

> *'When I came here I made RIOB my own. But also because I worked a lot longer in the addiction care, I was quite familiar with it already.' (R3)*

5.1.2 Awareness

As every respondent stated they were in possession of the guideline, it is but logical that all of the respondents were aware of its existence. Furthermore, all respondents mentioned that RIOB was known by everyone in the institution who worked in opioid dependence maintenance treatment. However, all of the content within the RIOB was not known equally among the respondents. For example, the conversation module DT was less familiar among the respondents. More than half of them did not know of the conversation module. However, many of them were familiar with the philosophy behind the conversation module.

5.1.3 Agreement

All of the respondents agreed that the introduction of RIOB improved the quality of OST. Before the RIOB, OST was sometimes unorganised and every institution had its own way of delivering care. The following quote reflects the general feeling of agreement towards the RIOB of the respondents.

> *'RIOB has made the opioid maintenance treatment visible and made visible what should be done for the clients. It made visible what is desperately needed at the moment and what is not done. It has led to the professionalization of opioid maintenance treatment. For the opioid maintenance treatment, it has done lots of good things. (R2)*

Most of the respondents mentioned that RIOB provides a framework where they can rely on. It enhances structure in care. For example, it makes sure that every client is seen at least four times a year to discuss their treatment plan and two times a year for a medical examination. However,

among the respondents the frequency of these check-ups was not always considered relevant and necessary. This will be further elaborated shortly. Furthermore, when addiction care institutions are working according to RIOB it enhances monitoring of the clients and the scene as illustrated in the following quote:

> *'Previously, the clients received their medication on prescription. There was no provision and therefore little control. There was a big black market with a lot of methadone on it. Because of the methadone provision this is now limited.' (R15)*

Although the RIOB improved the structure and quality of care and almost all respondents were glad with its existence, several respondents did mention that they think that the RIOB is a bit outdated. One of the respondents mentioned that the RIOB is from before the economic crisis and that therefore some of the content of the guideline is not up to date.

> *'Yes, it is written down very richly in its recommendations. It is not something from this era anymore, as in terms of money.' (R14)*

Some of the respondents mentioned that the required personnel and hours required for one patient are not feasible. It is too expensive and costs too much time if you would fully comply to the RIOB. For example, RIOB states that for every 200 clients, 1-fte (fulltime-equivalent e.g. full work-week) for one doctor is calculated to provide the minimum daily care. This is for a lot of the institutions not feasible as the number of clients divided among the doctor's extent over 200, as illustrated in the following quotes.

> *'For methadone patients, to call it that way, there has to be so many doctors and so many hours. Well, I think we don't make that and we are considerably beneath that.' (R14)*

> *'It is made in a way that is not practicable' … 'It has such an idealistic format where nobody has the money or personnel for. (R3)*

Another argument several respondents gave why they slightly disagree with RIOB is regarding the frequency of medical examinations and meetings with the client. Every patient needs to be fully medically examined twice a year and needs to evaluate their treatment at least four times a year. For a group of the patients, which are considered stable, this is thought to be unnecessary time and money wasting events. Furthermore, for stable patient these examinations can be unwanted and redundant. The following two examples support this statement.

> *'An example is that everybody has to be fully medically examined twice a year. That is unnecessary for a lot of people here. Everybody who is not physically well we see 4,5 or 6 times a year, so to speak. And if you are healthy, we would see you once a year, all of them, always. Complete screening, including blood samples with ECG with everything. And now we are obliged to do everything twice a year, because RIOB says so. That costs way too much money. For the patients as well, then they have to take blood samples twice a year, undergo and ECG twice a year. We do it for the people where it is considered necessary, but if it is necessary for everyone?' (R3)*

> *'Then I think, often things do not that change that much in 6 months' time. You see that is takes little steps and a lot of time in order to achieve a change for people with a prolonged chronical disease. It is for patients often annoying to have to tell four times a year how it goes when not much has changed. There I do have sometimes problems with.' (R15)*

However, on the other hand, there is also a group with a severe opioid addiction with a lot of comorbidity. One respondent mentioned that this group in particular is weak in communication and it is important that this group is monitored and screened to prevent as much harm as possible.

> *'But you know, these people come with things themselves so late. So, if we wouldn't screen, take blood samples and make pictures, you miss so much. A lot of things you will discover too late. So for that particular group, the weakest group, I think that this screening is very important.' (R14)*

This shows that RIOB differs in its applicability on different target groups. For some it provides a strict framework which is considered necessary, where for others this framework is considered too strict. Several respondents mentioned that since it is a guideline, it should be able to deviate from when it does not suit the target group properly. However, they stated that deviating from RIOB is not always that easy.

> *'But a guideline should be something where you can deviate from, but no, we get punished if we deviate from it.' (R3)*

> *'No, that is pretty determined. It should be a guideline, but it appears to be a field standard. And with that we are not so happy.' (R12)*

Thus, all of the respondent agreed that RIOB enhances the structure and quality of care. However, several respondents felt that the guideline is used and seen as a compulsory standard instead of a guideline. They wanted the guideline to be easier to deviate from on certain aspects. One of the aspects that was repeatedly mentioned by the respondents is the frequency of medical examinations and treatment evaluation moments. This would benefit, for example, the stable group of patients.

5.1.4 Adoption

In the theoretical background there has been made a distinction between adoption and adherence of a guideline. This study was not able to assess the difference and both are merged to indicate the level of compliance with the guideline.

Despite the fact that not everybody agreed with everything in the guideline, mostly the frequency of medical examinations and treatment evaluations, everybody roughly adopted RIOB in their practice. All of the respondents stated that they used the guideline in their practice and that most of their actions are in accordance with RIOB. To provide examples, when asked how much the RIOB influenced the shape of the treatment plan. Almost all respondent stated that the elements from RIOB were included in the treatment plan. Moreover, all the respondents strictly obeyed the frequency of medical examinations and evaluations moments given in RIOB. However, this is due to the inspections and audits commissioned by the health care inspection. This will be further elaborated in the next section. Furthermore, the documentation and storage of medication provision needs to be RIOB approved, as confirmed by one of the respondents: '*The methadone provision is all according to RIOB' (R1)*. Another reason given by one of the respondents why RIOB is used is that there is not that much of a choice. As one of the respondent stated:

> *'You don't have so many flavours in 'addictionland' in terms of guidelines, especially in the field of opioids there is actually just one.' (R15)*

There were also aspects of the guideline that were not adopted by everyone in practice. For example, some respondents abide with RIOB's way of prescribing the amount of medication when

patients do not show up at provision moments to collect their medication. RIOB describes a method that for every missed day the dosage of the medication decreases. The majority of the respondents did not adhere to this method and used institutional protocol or their own. Furthermore, as mentioned before, the conversation module to create a treatment plan with the client was not adopted in a single institution.

Thus, RIOB is used in every institution. However, not all aspects in the guideline are complied with as strictly as others.

5.2 Factors affecting guideline adherence

In this study four factors were investigated to assess their influence on the adherence towards RIOB. These factors consist of external factors, patient characteristics, practice characteristics and practitioner characteristics.

5.2.1 External factors

5.2.1.1 Healthcare inspection

The healthcare inspection plays an important role in the compliance with RIOB. Besides conducting inspections themselves, the healthcare inspections has ordered the institutions to do audits among each other. The respondents mentioned that this thorough inspection mainly reviews whether everything is done according to RIOB as the following quote illustrates.

> *'Then you have to take care that all of your files are in order. Everything RIOB demands; Twice a year nurse, once a year the doctor, once a year to the psychiatrist. All of that has to be correct in the file.' (R8)*

This quote also contradicts with other findings. The frequency of medical examinations and evaluation moments was previously mentioned to be two and four times a year, respectively. It seems to be unclear to the respondents what the exact number for these check-ups are given by RIOB.

Several respondents mentioned that when certain aspects are not correctly done according to RIOB, the institutions get a given time to improve it. When this is still not sufficient, one respondent mentioned that penalties as losing your license for the provision of opioid substitutes can occur. The respondents mentioned that aspects reviewed by the inspection ensured guideline compliance on those aspects. Some of them considered this not as a bad thing, since the guideline does enhance the quality of care. However, as already mentioned before, some of the respondents do think that in some cases it should be easier to deviate from the guideline.

> *'Sometimes it is considered too much that this is the only way to work with' (R6)*

5.2.1.2 Cuts

The economic crisis, has caused mayor cuts in addiction care. The respondents mentioned that the cuts influenced the quality of work, increased their workload and affected their motivation. All of these consequences are connected with each other. Due to the cuts, the same amount of work has to be done with a fewer number of people. This automatically has an influence on the quality of work which an individual can provide. This is illustrated in the following quote.

> *'the challenge is that we have to do much more work with fewer people and have to try to provide the best quality of work. Actually, I think the patients nowadays have to deal with the*

consequences. We simply don't have the time for it anymore. It is bizarre and we are so cornered that we have much too little time for patientcare. (R3)

As previously mentioned, some of the respondents stated that RIOB demands a specific amount of disciplines and hours of those disciplines per patient. As a consequence of the cuts the institutions endured, these are considered impossible to achieve. Therefore, affecting the capability of the institution to comply to the guideline. One positive effect two of the respondents mentioned, was that due to the cuts specific processes became more efficient, since the view on care became more critical.

5.2.1.3 Health insurance companies

The health insurance companies were often mentioned by the respondents. They do not have a considerable influence on the compliance towards RIOB, but their influence in the opioid maintenance treatment is significant. Hence, they are included in the results as it should be mentioned.

All of the respondents urged that the influence on their work in daily practice is significant and unpleasant. The health insurance companies dictate the shape and composition of the care in how it is delivered. Everything has to fulfil their requirements if the addiction care institutions want to be able to declare their healthcare expenses. Furthermore, several respondents stated that a lot of the available care packages for patients have been limited or excluded, resulting in limited options the practitioners can offer.

The dictating role of the health insurance companies is perceived among several respondents as frustrating, illustrated in the following two quotes:

'they determine how we work and they set the requirements' (R8)

'I mean, I am educated for this, after which I think; I think I was allowed to make decisions regarding that.' (R6)

According to one of the respondents, the health insurance companies should rely more on the professional judgement of the practitioners and addiction care should be more structured in the idea of bottom-up.

On the contrary, some respondents also understood that the healthcare insurance companies are so on the top of things. As one of the respondents stated: 'E*verything you do has to be accountable. You cannot just let disappear some drugs.' (P2)*. There are a lot of rules attached to addiction care. However, this is a difficult group to apply strict rules to.

In order to be able to declare your expenses at the health insurance companies, there has to be done a tremendous amount of administrative work. This amount of administrative work affects the motivation of the respondents. One respondent also urged that it influences the quality and focus of work, as illustrated in the following quote:

'Sometimes so many things have to be done that we forget to treat, because we are only busy with getting the diagnosis treatment combination forms and other lists from the health insurance companies right.' (R15)

5.2.2 Patient characteristics

All of the respondents emphasized that POD differ in severity of their addiction and characteristics. A part of the patients suffers from a lot of comorbidity, including cognitive impairments, damaged lungs or infectious diseases. While another part of the patients is considerable stable and does not suffer from a lot of comorbidity. Furthermore, there are patients which are considered a lot more trustworthy than others. RIOB does not take such a diversity in patients into account. As mentioned before, several respondents do not agree with the fact that every patient should come a specific amount of times to the institutions for examinations and evaluations. This affects the willingness to adhere to the guideline as illustrated in the following comment.

> *'People who are avoiding the scene for ten years and are completely out of it, are stable and are financial independent. Do they seriously need to come two times a year to tell two times the same story? Why can this not be done once a year? Why do I need to evaluate every six months the treatment plan which looks the same for ten years because the client is satisfied and the only care demand is to preserve the situation? Sometimes I have trouble with that.' (R15)*

5.2.3 Practice characteristics

This study was able to asses only one characteristic that could have influenced the adherence to RIOB. After the introduction of RIOB, protocols that were made by the institutions themselves had to be replaced with RIOB. One of the respondents mentioned that when protocols are sufficient to provide proper care and need to be replaced after a substantial amount of effort, this automatically results in an anti-culture. The same happened in some of the institutions with RIOB. Therefore, some of them were less willing to adhere to RIOB. One of the quotes from the respondent support this statement.

> *'The healthcare inspection said; You are doing great here. But in meanwhile, because all of those other institutions were not working as they were supposed to, they made a guideline. And when it was finished, they came here to tell us; you have to do it this way. While we were already doing good work.' (R3)*

5.2.4 Practitioner characteristics

This study could not identify measurable or consistent characteristics that affected guideline adherence. Every practitioner has his or her own thoughts, motives and values affecting choices and actions they make in daily practice. This is, however, within borders for what is considered responsible by institution protocol and the RIOB, reviewed by the inspection.

There are practitioners that tend to listen to and involve the patient more, where others tend to be stricter and like to dictate. This is illustrated in the next two quotes. These examples show that there were no consistent characteristics that made practitioner do specific actions. Committing to the guideline or shared decision making was affected by personal beliefs.

> *'Giving back a part of responsibility. You can look together with the client, but you must not decide for the client.' (R11)*

> *'I think it is part of addictive behaviour and addictive nursing, where putting boundaries and borders are much needed skills' (R4)*

5.3 Shared decision making principles in daily practice

5.3.1 Attitude towards shared decision making

All of the respondents agreed that shared decision making should be applied as much as possible in daily practice to create treatment plans. Several respondents mentioned that decisions that come from the patient are most likely to result in successful outcomes. In those cases, the patients are most motivated to take action.

> *'I think SDM is something very good. We can accomplish nothing if the patient does not want it himself. The patient should want it; it is not about what I want. The patient has to be willing to use less booze or methadone or stop using it. Not me. We may think that we know what is best for his health, but if they don't care, because they don't like doing that particular thing, then we will accomplish nothing. We are here to provide support, nothing more.' (R1)*

5.3.2 Choice talk: The influence of clients on the available options

An important aspect in SDM is providing the clients with the available options, so they can make an informed choice. In addiction care, the available options clients can choose from appear to be marginal. Some of the respondents mentioned that the treatment options could be classified into three groups; detoxification, medical treatment and assistance on different aspects of life.

Detoxification is always a considered option if the client is willing. Furthermore, medical treatment can be further into the dosage of the medication, the frequency of provision and the choice between methadone or buprenorphine. It seemed that those three options were not equally available at the beginning of the treatment. Clients seem to have most influence on determining the dosage of the medication compared to the frequency of provision or the choice between methadone and buprenorphine. Moreover, the option to provide assistance on different aspects on life is always a possibility if it is realistic and feasible.

In most cases, as stated by RIOB, the goal is to stabilise the client by reducing or ceasing the use of illicit drugs by providing the right dosage of methadone or buprenorphine. Some of the respondents said that the patients often know best what dosage of the medication feels best and inhibits craving for heroin. Therefore, this option is always provided for the clients, as the following quote illustrates.

> *'You are in a conversation with a client, and he receives 40 mg of methadone. The client starts to talk and says: 'Actually it is going quite well, but the final part of the day is difficult. In the evening around 10 o'clock I tend to use a little bit of heroin.' Then I ask the client if he wants to try to increase the dosage from 40 mg to 50 mg to overpass that final part of the day. We try this for a few weeks and look if the craving decreases. That's the way you discuss that with the client. If he really does not want to go up in dosage, then I say: Okay, fine.' (R9)*

However, in some cases the well-being of the client declines due to the dosage. One respondent stated that the doctor can then overrule the client's wishes and reduce the dosage, since that is considered medically the responsible choice.

The assistance provided besides medication is given on many different aspects in life. Most often mentioned was the assistance on housing and financial matters. When taken into care, a respondent mentioned that the patients are put in contact with a social worker, psychologist or a psychiatrist to stabilise the different aspects of life if considered necessary by the practitioners or clients. The assistance besides medication is considered an important part of the treatment, therefore this option is provided for the clients, as the following quote illustrates.

> *'Look, for a number of people the medication is important. But that is not the only thing. If I prescribe medication for someone and there are a lot of other problems; you are socially anxious, you are traumatised, you have a lot of debts, house eviction is imminent, you've got no job, you name it. All of those aspects need to be taken care of, because otherwise if I prescribe medication, it won't have any effect.' (R6)*

The clients seemed to have least influence on the frequency of provision and the choice between methadone and buprenorphine. Regarding the frequency of provision, it was often mentioned that it was based on trust. According to several respondents, stable clients that have proven to be trustworthy with the medication by not selling it, losing it, abusing it or using other drugs alongside, have the option to reduce the frequency of provision. This option is usually not available at the beginning of the treatment, but becomes more discussable during the treatment as a 'trust-relationship' between the practitioner and client needs to develop. The following quote exemplifies a stable patient with that option.

> *'Some of the clients come here for ten years already. You have achieved the highest possible with that client; They are considerably stable, they have a job, have a family. So that is a good thing and you have to encourage that. So, then you can reward someone like: We trust you with taking the medication, you can come once in two weeks to receive your medication.' (R9)*

Clients that are considered unstable do not have this option. It could be a future prospect, but then first certain agreements have to be kept. One important agreement is to take the medication properly. A lot of the respondents mentioned that there is trade in methadone. A method to keep that trade more under control is to increase the frequency of provision and subscribe smaller amounts of methadone. If the client wants to reduce the frequency of provision, trust needs to be won. Practitioners need to know whether the clients take all of their medication and do not sell the medication and compensate with heroin. A method for the practitioners to know what and how much opioids the clients are taking is to perform a urinalysis. In this way they can check if the client is telling the truth by looking if the analysis corresponds with what the clients says.

The choice for clients to choose between methadone and buprenorphine is influenced by various factors. First, the goal of the treatment is important. When clients try to reach total abstinence, buprenorphine can be used for the final stage. The clients transition from a low dosage of methadone (<30mg) to buprenorphine. However, this transition is considered difficult by the clients, as they endure withdrawal symptoms during the process. Therefore, clients often do not want to transition to buprenorphine. Furthermore, several respondents mentioned that with new patients, who have been using heroin for a relatively short period of time (<18 months), they would to reach total abstinence from the moment they are taken in with buprenorphine. Practitioners would prefer using buprenorphine since methadone is considered more difficult to withdraw from, as the following quote illustrates.

> '*When someone walks in, a young guy for example who just became heroin dependent, it is a waste to put them on methadone (R8)*.'

Moreover, another factor influencing the choice between buprenorphine and methadone is that there are more requirements to be met with buprenorphine. When using buprenorphine, you may not use benzodiazepines, alcohol or any other opioid alongside. As one of the respondents mentioned:

> '*but occasionally, the client also wants to use drugs alongside. Then buprenorphine is not an option' (R2)*.

Buprenorphine has certain benefits over methadone. Mentioned benefits were less stigma, less frequent use, less sedative effects and less cardiac problems. Therefore, some of the respondents mentioned that they would like to see more frequent use of buprenorphine in the future. However, two of the respondents mentioned that frequently clients in BMT tend to start using other drugs alongside again, as illustrated in the following quote.

> '*We often experience that clients who have been using methadone for a while, reduce in dosage and eventually transit to buprenorphine get stuck again at a given moment and start using drugs alongside again' (R10)*

Thus, the existing options that are available in addiction care are limited. Not all of the treatment options are options to choose from at the start of the treatment. The influence on the frequency of provision and the choice between methadone and buprenorphine are often limited in the beginning of the treatment, as first trust needs to be won by the client. When the practitioners decide for the client for what is considered best, it is often based on medical responsibility, which hinders the shared decision making process in those cases. Clients do have some choice at the beginning of the treatment regarding the dosage of the medication and the assistance delivered on different aspects on life.

5.3.3 Option talk: Benefits, limitations and understanding of the treatment options

The benefits and limitations of the treatment possibilities which are presented are always discussed with the patient according to the respondents. However, according to most of the respondents, the understanding of the treatment options by the clients can sometimes be limited and difficult. As one respondent mentioned:

> '*We are doing our best, but there is of course a large group who is also mentally or cognitively challenged. So that is something that you need to take into account.' (R6).*

By '*cognitively challenged*' they mean that the clients are often intellectually challenged due to the side-effects of the drugs, lack of education or inborn reasons. As a result, the practitioners often need to be repetitive in order for the clients to understand, which is not always achieved. The process of acquiring understanding by the clients and the outcome of that process is illustrated in the following quote:

> *'You always need to question if the client understands what medication we are going to use, where we are using it for and what the potential side-effects are. It is indeed remarkable that a lot of the clients actually don't have any clue what the medication does and why they use it.' (R5)*

Another reason that can hinder the process of understanding, which was highlighted by one of the respondents, is when people are not open for the information. An example is given in the following quote.

> *'But if people are not open for it, then I cannot explain it to them, because the information will not be processed. And in addiction care, especially here, we work with motivational conversations, which means that you need to ask permission like; may I explain to you what the consequences are of cocaine on your psychical well-being? If someone says; I do not want to know anything about that. Yeah, how can I provide information what he needs to make a good decision. That does make it practically difficult sometimes.' (R15)*

Thus, the potential benefits and limitations of the treatments are discussed with the clients if the clients are open for that kind of information. However, the understanding by the clients of the treatment options can sometimes be difficult to attain. This could hinder the shared decision making process as it is difficult to discuss something with someone if you do not fully understand what the subject of discussion is.

5.3.4 Decision talk: Making a decision

After presenting the available options, discussing the benefits and limitations of the treatments and checking for understanding, the decision has to be made. This decision making process is influenced by various factors.

First, the client's requests can sometimes be considered irresponsible according to the respondents. For instance, the practitioners could think that the client is not ready to make the transition to buprenorphine or to reduce the frequency in provision. The following quote gives an example of situation as such:

> *'If the client says; 'I just want to come once a week, want to use drugs alongside and have a alcohol promillage above what is allowed.' Well, that is something we cannot do. It has to stay medically responsible. And I don't know if you should call it a conflict, but it is a point of friction between what the client wants and what I want, not only from the protocol, but also if it medically responsible.' (R10)*

What is meant with *'medical responsibility'* is that clients have to administer the drugs in a responsible way. When the clients often use drugs alongside their medication or have a history of drug overdose or binging, irresponsible use of the medication can lead to health complications, as illustrated in the following quote.

> '*When someone is depressed and ask for methadone for four weeks, I say it is not smart with your depression, so we cannot do that.'…'You need to have a good insight in someone's situation, because you want to prescribe methadone responsible. We have had people who have committed suicide with methadone and we don't want that.' (R9)*

Another factor influencing the decision making is the state of the client. The state of the client has influence on what is considered responsible by the practitioner. Several respondents mentioned when clients are unstable, confused or intellectually challenged, you cannot always let the client decide for what they want.

> *'you try to collaborate with what a client wants, but when someone is confused or cognitively damaged you cannot always follow what he wants' (R15).*

Another respondent illustrated the same situation in different words:

> *'The clients have a choice when it is medically responsible' (R3).*

To determine what is medically responsible is often individually determined according to the respondents. Some clients are considered more stable or trustworthy than others, enhancing the option to negotiate with the practitioners regarding subjects as the frequency of provision. However, several respondents mentioned that clients are often cognitively challenged and that the majority of the clients are incapable of making right decisions after being provided with good argumentation. Therefore, in those cases the practitioners take control in the SDM process

> *'When someone is using a large amount of opioids and cannot oversee what the consequences are due to his addiction, or is not capable cognitively because he is under influence. He cannot comprehend the information sufficiently and make a good decision. This has limitations and then it is my job to determine what is safe and what is not safe. Then you are obliged as doctor to define limits.' (R15)*

These limits are most often translated to the frequency of provision and meetings. Some of the respondents stated that to determine what is considered medically responsible per client is determined in the first multidisciplinary consultation without the client, limiting the provided options and their influence on it. Two of the respondents mentioned that they want to try to involve clients in these multidisciplinary consultations. However, they also said it could be logistically difficult. The first multidisciplinary consultation takes place immediately after the intake and diagnosis. As one of the respondents stated:

> '*Yes, the intake is done by a treatment supervisor, by a psychiatric nurse practitioner and a doctor. The information gathered by these three are taken together and then we take a look, what are the possibilities and from that we make a preliminary treatment plan.' (P3)*

After these preliminary treatment plans are made, they are discussed with the patient. However, the treatment options for the client are often then already limited as what the practitioners consider responsible. As mentioned before, one respondent mentioned that it is the doctor's responsibility to set limits when the client is considered not capable of making the right decisions. The same respondent also mentioned that shared decision making originally comes from somatic care where the problems of the client are often a lot less complex. Therefore, one of the respondents stated: '*SDM is the basic attitude, but you should deviate when someone is not capable of doing SDM' (P15).* This illustrates that SDM is considered an ideal method, but is not always considered applicable in OST, as the following quote from the same respondent illustrates:

> '*So it sounds real nice, but it is practically impossible to inform the patient and expect that he can make the best decision' (P15)*

Thus, one tries to put SDM into practice as much as possible. However, it is sometimes hindered by the perceived incapability of the clients to participate in the process. In addition, sometimes there is a lack of trust between the client and the practitioner, therefore practitioners act to what they think is medically responsible. What seems to be the most frequent point of discussion and friction is the frequency of provision.

6. Discussion

6.1 Main findings

This research aimed to assess the implementation of RIOB and SDM principles for methadone and buprenorphine institutions in daily practices in the Netherlands. The current study found that RIOB is used in every institution. However, not all of the aspects are complied with as strictly as others. The healthcare inspection, and what they reviewed for, played a significant role in this discrepancy in guideline observance. For example, the conversation module, based on SDM, was not used once in a single institution, while aspects as the number of medical examinations and evaluation moments were strictly followed. Furthermore, several respondents urged that the guideline should be easier to deviate from on certain aspects, as that would be beneficial for certain client groups. For example, the described medical examinations and evaluations are often considered unnecessary and ambiguous for stable clients. Additional criticism on the guideline by the respondents was that the described minimum of hours per discipline for every client is considered unfeasible.

Furthermore, results showed that all of the institutions try to apply most of the SDM principles in daily practice, as they see SDM as an ideal method. However, to meet with all SDM principles sometimes seemed difficult. According to the respondents, the perceived incapability of the clients to participate in the process and the lack of trust between the practitioners and the clients sometimes results in the practitioners acting according to what they think is medically responsible. This induces a conflict between medical responsibility and client's autonomy, hindering the SDM process. The most frequently mentioned point of discussion between the client and the practitioner was the frequency of provision.

6.2 Healthcare inspection

This study indicated that RIOB was implemented to a considerable high level in every institution. Meaning that most of the practitioners were perceived to be acting in accordance with RIOB. However, not all facets of RIOB were equally implemented. The number of medical examinations and evaluation moments were literally copied from the RIOB, but, for example, the SDM conversation module DT was overlooked by both the practitioners and the healthcare inspection, arising the question 'why'? As guidelines in general describe 'best practice', it would be ideal if also aspects describing SDM were complied with. For the practitioners, reasons could be that they are using a different method or that DT is difficult to work with and takes too much time. But for the healthcare inspection it could be possibly due to a matter of priorities or the capability to verify these aspects. Assessing the level of SDM principles in daily practice is considerable more difficult than assessing the completeness of client files. According to an expert within Resultaten Scoren, which was contacted after the data collection was completed, one explanation could be that the difference in strictness imposed by the healthcare inspection is based on the risk assessment for the clients. Not using the SDM module in RIOB does not directly entail a great risk for the clients, where missing medical examinations could have potential bigger risks. The aim of the healthcare inspection is to ensures that quality of care is maintained and irresponsible care is excluded. To ensure quality of care, a lot of rules and agreements in the RIOB guideline made by field parties are based on about 25 different laws (Ministry of Health, Welfare and Sports, 2016). It is probably easier and perceived more necessary to evaluate the aspects based on these laws than to check whether SDM takes place. However, it seems unclear to several respondents what content of RIOB is based on laws and what are suggestions for best practice. For example, in textbox 3 a text excerpt from RIOB regarding the

frequency for medical examinations is reproduced. This clearly states that there is no law binding the practitioners to adhere to that particular amount of medical examinations each year. Yet, the respondent felt that this was compulsory, because it is strictly verified for by the inspection.

Textbox 3. Text fragment from RIOB regarding the frequency of medical examinations

'*There is no law that determines the frequency of physical examination with nurses or doctors that is considered necessary. Based on practice-based knowledge, a recommendation is given. The norm for the frequency for somatic examinations is a minimum of two times a year.*'

6.3 Guideline implementation strategies

As already mentioned in the contextual background, guideline implementation is a difficult process reflected by a gap that often exists between theory and practice (Grol, 2001). A review on effects of professional practice on health care outcomes claimed that approximately 50% of the patients receive treatment that differs from guidelines (Doumit, 2007). A study done by Prior (2008), compared different implementation strategies with each other. Different strategies applicable to the implementation process of RIOB were identified. The first strategy that was used to enhance implementation was to disseminate the document among the institutions. If dissemination is the only strategy used, then implementation is generally ineffective (Prior, 2008). Second, in order to familiarize the institutions with the content of the guideline, mainly traditional instructing strategies were used. These consist of passive information dissemination such as lectures and are considered ineffective compared to interactive educational strategies, which include workshops and practical sessions (Prior, 2008). Thus, it is important that the implementation of future guidelines is supported with different effective instructing strategies.

Third, one of the important factors that enhances implementation, is the elaboration and the quality of the content of the guideline (Prior, 2008). An analysis of the barriers encountered by the Dutch practitioners when complying with guidelines showed similar findings. Lack of agreement was perceived as the biggest barrier (Lugtenberg, 2009). Lugtenberg (2009) suggests that if there is such a lack of agreement, guidelines should be less compulsory, which is also supported by several respondents in the current study. Even more when some of the rules in RIOB audited by the healthcare inspection are not considered equally valuable and necessary for every client. The agreement on the content of the guideline differed among the respondents influencing the individual effort to adhere to the guideline. To overcome such difference, it is important to ensure that there is enough support from all stakeholders by taking into account all of their viewpoints, needs and social values.

Last, the strategy with the biggest impact on the implementation of RIOB was audit and feedback. Audit and feedback is a strategy where professionals are given feedback when their clinical practice is inconsistent with that of the guideline (Jamtvedt, 2006). The effectiveness of this strategy is considered uncertain or variable (Prior, 2008). Another study, focused on the effectiveness of this strategy stated that '*the relative effectiveness of audit and feedback is likely to be greater when feedback is delivered more intensively*' (Jamtvedt, 2006). Considering that all the respondents complied with the aspects audited by the inspection, this feedback delivered by the inspection has been rather intense. Some of the respondents did not agree with certain points of the content of the guideline, such as the frequency of medical examinations and evaluation moments for stable

patients. This seemed to be the most mentioned and disliked cause of disagreement with RIOB. Nonetheless, the inspection forced practitioners to comply with the aspects they disagreed on. Being compelled to comply in such a way can have its disadvantages. A research done by Festinger (1959) showed that forced compliance, '*I did one thing, but I believe the opposite',* is uncomfortable. Such discomfort, caused by extrinsic incentives and pressures, can reduce the motivation of practitioners affecting their quality of work (Deci, 1985). In order to reduce such extrinsic pressures and enhance the quality of work, RIOB should be less compulsory the aspects where practitioners repeatedly disagree on. Still, as described earlier, a lot of the content of RIOB is based on different laws to ensure high and safe quality of care. It is likely that a lot of the aspects reviewed by the inspection are based on law, making them compulsory. However, as previously mentioned and shown in textbox 3, though not everything the inspection verifies is based on law, it can still be perceived as compulsory, according to the respondents. It should be stated more precisely, which are the rules that have to be followed and which are the suggestions for best practice, so that practitioners know where they can legally deviate from the guideline and where they have to comply to it.

6.4 Barriers with shared decision making in addiction care

The current study indicated that all of the practitioners supported the underlying idea of SDM and want to apply it as much as possible. However, there are some perceived barriers hindering the application of SDM in daily practice. First, the idea of SDM has its origin in the somatic healthcare (Charles, 1997; Loth, 2012). In psychiatric and addiction care SDM is relatively new. Trainings for practitioners to adopt SDM, tools to enhance SDM as well as to measure its effects, are far less developed and assessed in mental and addiction healthcare than they are in somatic healthcare (Barry, 2012). Furthermore, in somatic care the treatment options and their results are often much more straightforward. The outcomes in somatic care are often easier to measure, for example blood pressure or glucose levels. So, the results of particular treatments in somatic care are generally more evidence-based than they are in psychiatric care or addiction care. Therefore, discussing the possible options and the possible outcomes is easier in somatic care, enhancing the SDM process. Moreover, in this research, some healthcare professionals stated that clients often lack the capacity or ability to make the right decisions as they are often intellectually challenged in comparison to somatic care patients. A study done by Barry (2012) had similar findings. Many practitioners question the ability of clients to participate in the process, especially those with cognitive challenge, which are often present among POD. Thus, there are many differences in the development and applicability of SDM in somatic and addiction healthcare.

Second, the conflict between the practitioner's medical responsibility and the client's autonomy identified by this study seems to be consistent with other research investigating SDM. As pointed out by Godolphin (2009), this is a perceived barrier in the application of SDM. Practitioners often decide for the client what they consider achievable or responsible. In this study, it became clear that medical responsibility often means that the practitioners determine the frequency of provision and the choice between methadone and buprenorphine. Godolphin (2009) illustrated the choices between in medication with the following example: '*What if the patient, made aware of the choice between drug A (the doctor's preference, based on the evidence of population studies or the opinion of a colleague) and drug B (less effective but easier to swallow), chooses the latter? To many physicians, it might seem much easier simply not to mention the choice and to thus perpetuate passivity.'* (Godolphin, 2009). This way of thinking could influence the SDM process in addiction care, as well. To give an example, in prescribing buprenorphine or methadone, practitioners often choose

the latter. A fraction of the treatment population is on buprenorphine. There could be many reasons 'why' this is happening. One important reason is the fact that buprenorphine is only possible if you are treated with a low dosage of methadone or when the client is new to the treatment, receiving no methadone. Since many of the clients have been on methadone for a long time, long before buprenorphine became available, the eligibility of the target population to be treated with buprenorphine is marginal. Practitioners work significantly more with methadone than buprenorphine, which could have influenced the developed skills regarding those treatments. Methadone could be an easier choice. Therefore, it could be that buprenorphine is an option that is not shared with the clients as frequently as methadone. In such a scenario the practitioners make the decision without discussing it with the client, while the client might have wanted to be treated with buprenorphine. A study should be done to analyse the prescription practice of buprenorphine in OST and if buprenorphine is indeed prescribed unfairly less than methadone.

Third, several studies done to investigate the application of SDM in daily practice showed that there seems to be a great consistent gap between theory and practice (Braddock, 1999; Elwyn, 2003; Towle, 2006). One of the given barriers was the lack of training in the skills and habits of SDM. Through medical training the physicians learn communication skills, however these are often focused on skills such as *'getting information from the patient and delivering bad news'* (Godolphin, 2009). In this study, none of the respondents mentioned that they received SDM training, but many declared that it is a basic attitude all of the practitioners should have. However, Godolphin (2009) stated that the communicative skills associated with SDM are difficult to learn and practice, as *'any complex communication involves attitude, effort and time to acquire or change'* (Godolphin, 2009). To apply those skills within addiction care could be even more difficult. Moreover, time constraints have often been perceived as barriers to practice SDM (Godolphin, 2009). Given the fact that a substantial part of the target population is perceived as being cognitively challenged and slow in understanding, this barrier is enhanced even more in addiction care. Communication training in SDM is therefore all the more important. Lacking SDM communicative skills could have hindered the ability of the practitioners to apply SDM.

6.5 Strength and limitations

A strength of this study is the variety of the study population. Every institution for addiction healthcare in the Netherlands is included and from those different institutions, various disciplines were interviewed. The disciplines included nurses, doctors and treatment supervisors. The variety within the study population led to a broad and differentiated view on the subject. However, only one of the different disciplines was included per institution, leading to possible incomplete and different view per institution. Personal beliefs and job perspective could have influenced that view. Furthermore, every institution has several different establishments, where ideas and methods could differ. Be that as it may, this study did not try to get a thorough insight in every institution to assess the implementation of RIOB and SDM principles. This study was designed to provide a status report around those subjects in the Netherlands. In order to give a thorough insight into each institution, more disciplines and locations from every institution should be included.

It should be taken into account that the method of data collection that was used to give an insight into the SDM process in daily practice, could be incomplete. In this study, interviews were conducted to try to provide an insight, which was sufficient to assess the implementation of RIOB. However, for assessing the SDM principles in daily practice, interviews only provide information from the perspective of the practitioners and only about what the respondents are willing to share or are

aware of themselves. To assess the actual practice of SDM, a better method would be to videotape the consultations, as that would provide an honest and integral view of actual practice. Within the scope of this study that was not possible.

Furthermore, this study tried to assess the implementation level of RIOB in the institutions of addiction care. When doing the interviews, it turned out that four of the respondents were involved in the development of the guideline, which could have influenced the results. It is likely that respondents knew more of the content than others, providing an overestimation of the general awareness of the guideline. Furthermore, they could have been more personally and emotionally attached to the guideline, resulting in a different view of the guideline than when 'neutral' respondents would have been interviewed.

6.6 Conclusion

Concluding, as a status report, this study has identified several aspects in the implementation of RIOB and SDM principles in addiction care institutions in the Netherlands that have led to several recommendations and ask for further research.

This research showed that RIOB can be considered to be implemented in every institution. However, not all of the aspects are complied with as strictly as others. This is partly due to the healthcare inspection that differs on which aspects it verifies. Moreover, RIOB differs in its applicability to different target groups. Respondents mentioned that RIOB should be less compulsory on the frequency of medical examinations and evaluation moments, when stable clients are involved. In order to make it less compulsory, it must first become clear which content of the guideline is based on law, what the healthcare inspection checks, and what are mere suggestions for best practice. Only then will practitioners be able to know where they can legally deviate from the guideline.

Furthermore, this research has shown that all the institutions try to apply most of the SDM principles in daily practice. However, working according to all SDM principles seems difficult. There are several barriers hindering the application of SDM in addiction care. A lot of these barriers are due to the 'lack of experience' in applying SDM in addiction care. Training in SDM and the development of tools are considered a necessity to overcome these barriers. However, it should be kept in mind that SDM could possibly not be as successful in addiction care as it is in somatic care.

6.7 Recommendations

6.7.1 Making RIOB more explicit and less compulsory

It is often mentioned throughout this paper that a lot of the respondents argue whether particular aspects in the RIOB should be applied by the inspection so strictly for every client. To save money and time for the institutions as well as for the clients, in some cases RIOB should be inplemented less strictly. Especially the frequency of medical examinations and evaluation meetings should be less compulsory for clients who have proven stable and have been avoiding the scene for several years. The practitioners, who have the experience, professionalism and capacity to assess this properly, can individually determine such cases. Furthermore, as mentioned in the discussion, a lot of the content of RIOB is based on laws where should be complied with. The frequency of medical examinations is not bound by law and is an evidence based suggestion for best practice. Still, the health care inspection verifies this closely. It is doubtful that practitioners know what exactly in the guideline is bound by law and what is not. RIOB should be more explicit and clear on what is law and what is not, so that practitioners know on what aspects they can deviate in order to suit the client's best interest. It would be best if distinction was made, for example with colour labelling, between the ideal situation, what the inspections caves for and what is law.

6.7.2 Shared decision making training

None of the respondents mentioned that they received SDM training. As urged in the discussion, there are a lot of communicative skills and practice required to be able to guide the client in the best possible SDM process. Including SDM training in the education and training of practitioners does not only enhance their ability in SDM, but also increases the coherence of the idea about SDM among the practitioners. Sharing the same vision increases consistency and equality in providing care. Of course it has to be been taken into account that a distinction has been made between 'present' practitioners and 'future' practitioners. For today's practitioners, a course or a workshop developed by experts which should be given in every institution. The practitioners should thus enhance their awareness of the method and skills. The same course or workshop should be used to increase consistency. For 'future' practitioners, SDM should be included in earlier stages of their education and training. Courses can be developed to be given at universities or used by institutions.

6.7.3 Patient involvement in multidisciplinary consultations

Currently, the options that the clients have are often predetermined by the practitioners. During the intake, practitioners make observations directly influencing their opinion about the client. These opinions are discussed with other practitioners during the first multidisciplinary consultation after the intake. After the multidisciplinary consultation boundaries are set for the client, limiting their options of treatment. Two of the respondents promoted the idea that clients should be involved in these multidisciplinary consultations where these boundaries are traced. When clients participate in these consultations, choices that shape the treatment will be made with the patient, instead of for the patient. They will be able to deliver direct feedback on choices made by the practitioners, thus enhancing their involvement in the SDM process. However, as already indicated by the respondents, this can be logistically difficult and further research is required to know how to put this into practice.

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8. Appendix

8.1 Interview guide

This interview will be semi-structured. This predetermined structure will cover the topics derived from the conceptual model. However, not all interviews will be the same, because the different interviewees will give different answers, leading to different follow-up questions. New concepts may pop-up.

Introduction

- Mijn naam is Maarten Beijer en ik ben een student van de master Management, Policy Analysis and Enterpreneurship in Health and Life Sciences. Voor deze studie loop ik nu stage bij Stichting Mainline.
- Door u te interviewen probeer ik inzicht te krijgen in de dagelijkse praktijk in methadon en buprenorfine verstrekkingen in Nederland in het opstellen van een medisch-behandelplan voor druggebruikers.
- Doel van dit onderzoek is om als signaalonderzoek mogelijke aanbevelingen te leveren, die de huidige situatie zouden kunnen bevorderen.
- Het interview zal bestaan uit verschillende delen; eerst zal er gevraagd worden naar wat algemeenheid over uw werk. Daarbij zitten algemene vragen zijn over uw instelling, patiënten en omgeving. Daarna zullen we het hebben over de RIOB en zullen we afsluiten met het tot stand komen van een behandelplan. Het interview is niet heel erg gestructureerd, dus we kunnen tussen de onderwerpen wisselen zoals het interview loopt.

Interview procedures

- Het interview zal tussen de 60 en 90 minuten duren.
- Er zijn geen foute antwoorden en als er onduidelijkheden zijn, kaart het alsjeblieft aan.
- De resultaten zullen anoniem verwerkt worden en zullen niet te herleiden zijn naar u of uw instelling.
- Ik wil graag dit interview opnemen. Bent u daar content mee?

Inleidende vragen

Practitioner characteristics

- Kunt u wat vertellen over uw werk hier en uw functie?
- Hoe bent u betrokken bij het opstellen van een behandelplan?

- Hoe lang doet u dit werk al? (*Mag ik vragen wat uw leeftijd is?*)
- Wat is uw motivatie om dit werk te doen?

Patient characteristics

- Hoe ervaart u de cliënten bij het opstellen van een behandelplan?
    - In hoeverre schat u de cliënt capabel en geïnformeerd om keuzes te maken?
    - In hoeverre zijn de cliënten coöperatief?

Practice characteristics

- Hoeveel cliënten ziet u per dag? Is hier een tijdschema voor?
- Hoe lang duurt gemiddeld een afspraak met de cliënt?
- Hebben de cliënten een vaste behandelaar of vast aanspreekpunt?
- Hoe zou u de werkcultuur hier omschrijven in de dagelijkse praktijk?
    - Nadruk op productiviteit of kwaliteit van zorg?
- Wat is het uiteindelijke doel wat dit instelling wilt bereiken? (Waar staan jullie voor?)
    - Wat willen jullie betekenen voor de druggebruikers?
- Is er een gestandaardiseerde methode die in de instelling wordt aangeraden om te gebruiken om tot een behandelplan te komen?

Environmental characteristics

- Zijn er invloeden van buitenaf die invloed hebben op u manier van werken (bijvoorbeeld het opstellen van een behandelplan)? Zo ja, welke? (Verzekeringen, bezuinigen overheid)

Dissemination of guidelines

- Bent u bekend met RIOB? Zo ja, Hoe bent u hier mee in aanraking gekomen? (Gelezen op internet of via de organisatie?)
    - Zijn uw collega's bekend met RIOB? Zo ja, hoe?
    - (Zijn er trainingen geweest om de RIOB onder aandacht te brengen?)
- Wat vindt u van de RIOB?
- Zijn er ook andere richtlijnen die u als belangrijk beschouwt voor het opstellen van een behandelplan? Zo ja, welke?

Awareness-to-adherence

Awareness

- Bent u bekend met wat er in de RIOB staat m.b.t. Samen Beslissen

Agreement

- Wat vindt u van wat er in de RIOB staat m.b.t. Samen Beslissen?

Adoption

- Heeft u weleens de module Samen Beslissen toegepast voor tot het stand komen van een behandelingsovereenkomst?

Adherence

- Gebruikt u de module Samen Beslissen altijd voor tot het stand komen van een behandelingsovereenkomst?
- Zo ja, hoe bevalt het?

SDM

- Zo nee → Hoe verloopt de procedure van het tot stand komen van een behandelingsovereenkomst tussen u en de cliënt?
- Wat verstaat u onder shared-decision making?

Choice talk

- Worden de beschikbare opties voor een behandeling gegeven aan de druggebruikers? Welke?
    - Hoe wordt er omgegaan met de keuze buprenorfine en methadon?
- Hoe krijgen de druggebruikers eerst voorlichting over de situatie waarin zij zich nu in bevinden? (Nieuwe cliënten)

Option talk

- Hoe worden de voordelen en de nadelen van de beschikbare opties behandeld?
- Hoe wordt er nagegaan of de druggebruiker de beschikbare behandelopties begrijpt?

Decision talk

- Hoe wordt het besluit genomen?
    - (Worden de waarden en voorkeuren van de druggebruiker meegenomen in het besluit?)

Continuous treatment

- Hoe verloopt de behandeling na het opstellen van een behandelplan?
    - Hoe wordt de behandeling bijgesteld als dat nodig is? (Gaat dat in overleg?)

Afsluitende vragen

- *Zie je de RIOB, of delen ervan, terug in het medisch behandelplan?*
- Wat zijn de grootste barrières? (Zijn er volgens u verbeter punten op dit vlak?)
    - Hoe zouden deze verbeterd kunnen worden?
- Wat is volgens u de beste manier om tot een behandelplan te komen?

Closing

- Vraag naar extra informatie: heb ik iets gemist? Heeft u nog iets toe te voegen?
- Herhaal de opvolgende procedures: Ik zal de resultaten anoniem gebruiken voor mijn onderzoek. Als u nog verder iets toe te voegen heeft kunt u mij altijd contact met mij opnemen.
- Bedank de participant