UNSW SYDNEY | Australia's Global University

Centre for Health Equity Training, Research and Evaluation

NSW GOVERNMENT | Health
South Western Sydney Local Health District

Interventions for smoking in pregnancy and post-partum period

Scoping Review Report

Prepared by Karla Jaques

Date: July 2020

Project Team

Karla Jaques, CHETRE

Dr. Patrick Harris, CHETRE

Dr. Fiona Haigh, CHETRE (Initial Scoping Review)

Dr. Abela Mahimbo, CHETRE (Initial Scoping Review)

Acknowledgements

We would like to acknowledge the contributions of the Project Officer from the SWSLHD Quit for New Life program and thank the women who participated in an interview for their time.

Contact

Karla Jaques

Email: Karla.jaques@health.nsw.gov.au

Phone: (02) 8738 9320

Contents

Background

Smoking in pregnancy (SIP) is associated with poorer maternal and child health and development outcomes. In New South Wales, in 2016, about 8.3% of women still smoked during pregnancy, ranging from 1% to 31% across Local Health Districts (LHDs). SIP rates are nearly eight times greater in the most disadvantaged areas compared to the least disadvantaged areas. Quit rates in the most disadvantaged areas are about half that of the least disadvantaged areas. Pregnant women are more likely to quit smoking during this time than at any other period in their lives. Targeting interventions during this 'window of opportunity' is, therefore, a cost-effective way of both reducing the percentage of mothers who smoke during pregnancy and potentially reducing the percentage of women who smoke.

Purpose

This document provides the findings of a scoping review undertaken by the Centre for Health Equity Training Research and Evaluation (CHETRE). This scoping review was undertaken to:

- summarise the effectiveness of the approaches used for smoking cessation (incentive and others) in pregnancy in order to inform implementation of best practice approaches for the SWSLHD;
- provide recommendations for future policy and practice;
- inform a possible future TRG grant application (indirect outcome)

Method

This project has adapted overtime, using an iterative process the scope of the project changed mid-way through the process. This is reflected in the methods below.

Initial scoping review

Peer-reviewed articles were identified through an electronic search of all publication years (until 19th September 2019) in two databases: Medline and CINAHL. The following search terms were used: 'smok*' OR 'cigarette*' OR 'tobacco' OR 'nicotine' AND 'cessation' OR 'quit*'. The search was limited to systematic reviews published in the last 10 years, adults and in English only.

The peer reviewed literature searches were supplemented by a hand search of grey literature including government documents, professional body guidelines and any relevant project reports.

Secondary scoping review

The results of the initial scoping review focused on smoking in pregnancy were presented to the working group. After discussions with the working group, representatives from the Antenatal space and the existing District smoking cessation program, a gap was identified for women postnatally. It was then decided to shift the focus of the review to the post-natal period. The findings of the initial scoping review were supplement using a hand search of post-natal smoking cessation literature.

Interviews

Pilot interviews were conducted with women from the existing District supported Quit for New Life (QFNL) program. Questions were based around women's experiences with the program and to explore potential strategies in the post-natal period.

Findings

Figure 1 outlines the 2 scoping reviews that were completed.

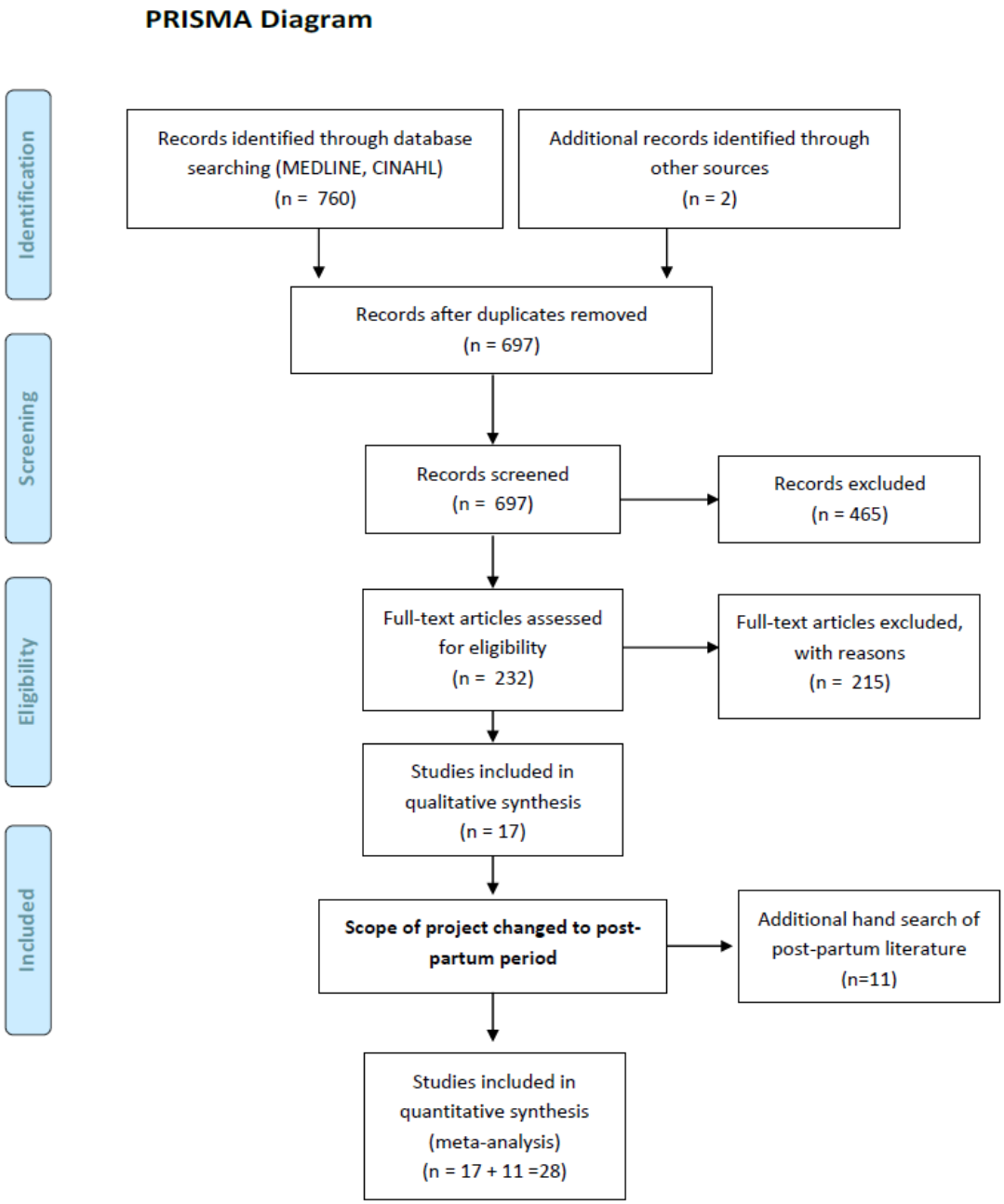

Figure 1: PRISMA Diagram of Scoping Review Process

Smoking in Pregnancy

The search yielded a total of 760 articles (Medline - 290, CINAHL - 470). After removal of 63 duplicates, 697 articles were left for title and abstract screening, with 232 articles potentially eligible for data extraction. After a targeted review of eligibility was undertaken, 17 studies were included in the final qualitative synthesis.

Key points to note when considering smoking cessation interventions for pregnant women:

- Education, income, employment and social support networks are key determinants of social economic status indicating an inverse relationship with smoking in pregnancy;

- Higher proportion of women stop smoking during pregnancy than at other times in their lives, almost 50% spontaneously;
- Spontaneous quitters during pregnancy tend to be older, more highly educated, less addicted, less likely to have partners who smoke and likely to quit without any intervention
- If most women who quit do so without intervention, advice and programming directed at pregnant women should take a different focus, perhaps a focus on women's health rather than foetus health long before pregnancy and long after pregnancy
- Interventions that divert attention from 'blaming the victim' and seek to accept and respect individual values, capabilities, circumstances and culture may be more feasible and applicable for disadvantaged groups.

Current practice guidelines- smoking cessation in pregnancy

Australian Department of Health's Pregnancy Care Guidelines (2019) provide clinical guidelines for health professionals to advise women of the risks associated with smoking during pregnancy, assessing smoking status and supporting cessation or reduction of smoking. These guidelines include:

- Assessing smoking status

It is recommended that smoking status is assessed at the first antenatal visit. This includes the woman's status as well as her exposure to passive smoking e.g. partner, family. During this visit health professionals are encouraged to provide women and their partner with information of the risks of smoking (including passive exposure) during pregnancy and explain the benefits of quitting. Smoking status should be continually monitored throughout pregnancy.

- Support Cessation

It is recommended that women should be provided with smoking cessation interventions, the guidelines support the referral of cognitive behavioural therapy or nicotine replacement therapy (NRT) (if appropriate). It should be noted that it is advised that NRT intermittent use (gum, tablet etc.) is preferred over continuous use formulations (patches) it is advised that this support be offered at each antenatal visit. In cases where a woman expresses a clear wish to continue, reiteration of the risks and benefits is recommended. If cessation is not possible, practitioners are advised to continue to support women to reduce smoking. This support should continue throughout pregnancy. Health professionals are encouraged to be informed of local smoking cessation programs, including community support groups, 'Quitline' or State/Territory services.

- Aboriginal and Torres Strait Islander Populations

The guidelines highlight that Aboriginal and Torres Strait Islander women and adolescent women are at a higher risk for continuing to smoke during pregnancy. The guidelines ask practitioners to consider the social norms for these groups around discussing smoking and cessation options. The guidelines recommend that for Aboriginal and Torres Strait Islander women, culturally appropriate smoking cessation services should be offered and that nationally supported anti-tobacco workers should be involved where available.

Other professional guidelines have been developed however they are focused on supporting smoking cessation in the general population e.g. Royal Australian College of General Practitioners 'Supporting smoking cessation: a guide for health professionals' (2011).

Interventions

Below is an overview of the interventions used for smoking cessation in pregnancy as summarised from the literature:

- **Counselling interventions**: provide motivation to quit, support to increase problem solving and coping skills. Include interventions such as motivational interviewing, cognitive behaviour therapy, psychotherapy, relaxation, problem solving facilitation etc.
- **Health education**: Women are provided with information about the risks of smoking and advice to quit, but are not given further support or advice about how to make this change.
- **Feedback:** Mother is provided with feedback with information about the fetal health status or measurement of by-products of tobacco smoking to the mother. Interventions include ultrasound monitoring and carbon monoxide or urine cotinine measurements, with results fed back to the mother.
- **Incentive-based** interventions (contingent reinforcement schedule): Women receive a financial incentive, contingent on their smoking cessation; these incentives may be gift vouchers. Lack of acceptable interventions for women identified as one of the barriers affecting implementation of smoking cessation into standard antenatal care. Contingent reinforcement has strong theoretical grounding within behavioural psychology and more specifically the theory of operant conditioning. Guiding principles of contingency management include use of: behavioural contracting; positive reinforcements; frequent and immediate feedback and rewards; and incentives of sufficient and incremental magnitude.
- **Social support** (peer, professional and/or partner): Intervention explicitly includes provision of support from a peer (including self-nominated peers, 'lay' peers trained by project staff, or support from healthcare professionals), or from partners, as a strategy to promote smoking cessation.
- **Exercise interventions:** Structured support for exercise is provided with the specific aim of promoting smoking cessation in pregnancy
- **Self-help aids:** wide-reaching, low cost and appeal to pregnant smokers who want to quit; booklets (most common form), video, telephone (recorded messages) and computer-based messages.
- **Telephone support programs**: Automated advice on quitting. Advantages -flexible, private and non-stigmatising, reduce differences related to socio-economic status and overcome access barriers (transport, geography); disadvantages – language barriers, recipient-initiated services may not be received well; individuals may perceive it to be impersonal
- **Interventions using digital platforms:** telephone, video, internet, mobile apps
- **Pharmacological** interventions: Nicotine Replacement Therapy (NRTs) such as patches, inhalers, gums and nasal sprays.

Effectiveness

A systematic review by Chamberlain et al. (2014) found that there is evidence to support counselling, feedback and incentive based programs with incentives showing the greatest effect size.

There is no strong evidence to support telephone based programs (Dennis & Kingston 2008, Lavender et al. 2013) however it should be noted that preliminary studies of digital interventions (computer based and text based) have shown promising results (Griffiths et al. 2018).

Reviews have found that there is insufficient evidence on the effectiveness of NRT interventions for pregnant women (Trivedi 2013, Coleman et al. 2011).

There is strong evidence to suggest that programs combining a range of approaches:

- Counselling, feedback and incentives appear to be effective; however the characteristics and context of the interventions need to be taken into account. The effect of health education and social support is less clear (Chamberlain et al. 2017)
- No strong evidence that telephone support is an effective smoking cessation strategy among pregnant women during pregnancy or during the postnatal period (Lavender et al. 2013 & Dennis & Kingston 2008)
- Behavioural therapy should be encouraged before or at least in conjunction with pharmacological intervention (Greaves et al. 2011).
- There is insufficient evidence on the effectiveness of NRTs for smoking cessation in pregnancy (Coleman et al. 2011 & Trivedi 2013)
- Combining tailored information, counselling, and incentives may be promising interventions for smoking cessation among low-income pregnant women (Greaves et al. 2011).

Cost-effectiveness data

- Pregnancy-specific, self-help materials reported to be more cost effective than standard smoking cessation information or self-help materials. Specific estimates include: 1 (non-smoker): $84 for telephone-based motivational smoking cessation counselling (Parker et al, 2007); and an average cost of $56 per person for each smoking cessation intervention, and $299 to produce a non-smoker at the end of pregnancy (clinic-based counselling intervention (Dornelas et al, 2006).
- A trial of financial incentives (Tappin 2015), found the short-term incremental cost per quitter at 34 to 38 weeks' gestation was £1127, and longer-term cost per quality adjusted life year gained was £482; well below the UK National Health Service threshold of £20,000
- Heil et al (2008) estimated the average individual cost for the voucher contingent group to be between 0 and 1,180 dollars, although they argued that this cost would very well balance the potential medical costs associated with pregnancy smoking.
- Higgins and colleagues (2004) reported a lower total mean voucher earning of $397 in the contingent group and $313 in the non-contingent group, suggesting that this method may be cost effective. Incentive programs require biochemical assessments of cessation which may increase costs.
- Ruger et al. (2008) reported that among low-income pregnant women, motivational interviewing cost more but provided no additional benefit compared to usual care (the incremental cost-effectiveness of motivational interviewing versus usual care would have been $117,100/LY saved), but might offer benefits at costs comparable to other clinical preventive interventions ($86,300/QALY saved) if 8–10% of smokers are induced to quit.
- Pollack (2001) found that typical cessation services available to all pregnant smokers could avert 108 sudden infant death syndrome deaths annually, at an estimated cost of $210,500 per life saved.

General population

The use of behavioural smoking cessation interventions [brief advice, incentives for quitting, self-help interventions and behavioural support (interventions based on motivational interviewing principles- can include the provision of information, advice, support, encouragement, skills training,

cognitive behavioural therapy or other counselling)] for some socially disadvantaged groups (low-income female smokers and individuals with a mental illness) appear promising; however, overall findings are inconsistent (Bryant et al. 2011).

Post-Partum

As described above, the focus of the project shifted to the post-natal period. This section presents some literature from the initial search which had post-natal outcomes as well as a hand search of post-natal smoking cessation literature.

There is evidence to support the notion that smoking in the post-natal period, particularly in the first 6 months of life when there is close contact, is harmful to infants. Smoking in the postpartum period can expose infants to environmental tobacco smoke, causing negative impacts to their health. Environmental tobacco smoke has been linked to acute respiratory illness, ear infections, behavioural and developmental problems in infants (US Department of Health and Human Services 2006 & DiFranza, et al. 2004).

There is also evidence to suggest that after birth, post-natal women have high rates of relapsing. A study by McDermott et al. (2012) found that around 20 to 30% of women quit after they become pregnant, but about half relapse within six months after their delivery, especially if their partner smokes or they live with other smokers. Within a year after giving birth, studies have shown that between 70-80% take up smoking again (Jones et al. 2016).

It should be noted that unlike smoking in pregnancy, the Australian Department of Health's Pregnancy Care Guidelines (2019) do not contain guidelines with specific strategies for the post-natal period however they do acknowledge the high rates of relapse and the high correlation of partner smoking and relapse. The guidelines stress the importance of monitoring smoking status and suggest offering smoking cessation support strategies to the partner.

Effectiveness of interventions in post-natal period

There is limited evidence to support the effectiveness of smoking cessation in the post-natal period. A Cochrane review (Chamberlain et al. 2017) suggested that there may be a need to promote different approaches in the postpartum period, the literature suggests that post-partum approaches are extensions of antenatal interventions (post-partum being measured as an outcome). However, most antenatal approaches do not include post-partum smoking as an outcome.

- **Counselling:** A review (Chamberlain 2017) found that there is some evidence to suggest that counselling can be an effective approach for maintaining abstinence in the medium (6-11 months postpartum) and long term (12-17 months). Coleman-Cowger (2012) found evidence to support phone-based continuing care approach into the post-partum period, as phone based counselling has proven to be effective when focused on relapse prevention in post-partum period (Reitzel et al. 2010 & Jime´nez-Muro, 2013).
- **Incentives:** There is limited evidence to support the use of incentives in the postpartum period as many studies focus on the antenatal period. It should be noted that incentives in the prenatal period have been shown to be one of the more effective models with some studies suggestion between 32-41% at the end of pregnancy (Donatell et al. 2000 & Heil et al. 2008). One study which followed participants past 6 months indicated that even when incentives ceased abstinence was maintained at a rate of 27% 12 weeks following cessation (Higgins 2003). Another study by Boyd et al. (2016) found strong evidence to support the efficacy of incentives in the medium term (6-11 months) term.

- **Health education:** A Cochrane review (Chamberlain et al. 2017) found that health education increased rates of abstinence of women in the 0-5 month postpartum period.
- **Household/partner:** Limited studies including the targeting of partners smoking habits, highlights the focus on individual behaviour and not acknowledging social factors/external motivation (Chamberlain et al. 2017)
- **Combination:** A study by Gadomski et al. 2011 found that a combination of counselling and incentives resulted in significantly higher abstinence rates in the longer postpartum period. The Baby and Me program incorporated prenatal face to face counselling and 3-4 weekly biochemical testing for 1 year postpartum, with mothers testing negative receiving vouchers for diapers.

Interviews

Targeted interviews were conducted with women in the post-partum period after receiving the SWSLHD supported QFNL program. These pilot interviews were conducted to describe their experiences with the QFNL program and explore options for post-partum strategies.

Quit for New Life

The QFNL program is an initiative of the Centre for Population Health, NSW Ministry of Health in partnership with Kids and Families NSW which supports smoking cessation strategies for women who identity as having an Aboriginal baby. The initiative aims to reduce tobacco related harm from maternal smoking and environmental tobacco smoke (SWSLHD 2018).

Within SWSLHD, the QFNL program was initially within Health Promotion Service from inception in 2014 and has since transferred over to SWSLHD Drug Health Services located at Campbelltown Hospital (June 2019-current). The program consists of one Aboriginal Health Education Officer (AHEO) delivering culturally safe appropriate high quality education in the home setting. Recently due to COVID-19 telephone contact has replaced home visits with increased interaction per client to extend support. A Post Clinical Record Audit was conducted on the program as a Quality Improvement Project. The report was completed in April 2019 with the aim of compare data from a Pre-Audit conducted prior to program implementation in 2013 and to make recommendations for future sustainability in LHDs once state funding ceased. Since inception SWSLHD have supported over 500 families, conducted over 1,200 home visits and provided over 1,355 vouchers for free Nicotine Replacement Therapy. The program has a self-reported quit rate of 12.10% with pregnant/postnatal women at 13.02% and cohabitants 10.66%. The Model of Care emphasises the importance of joint care for Aboriginal families and identifying a holistic view of health.

The program includes partners and up to 10 household members who also identify as a smoker or have recently quit and are worried about relapse. QFNL in SWSLHD offers 12 weeks' worth of NRT products free or each person eligible for the program via a voucher. Vouchers are like a script they are taken to pharmacies that have an MOU with the service. Vouchers are sent to finance team in Drug Health for processing. Due to the success of QFNL a Smoking in Pregnancy program has been developed in the LHD to integrate all women who smoke during pregnancy.

Findings

Of the sample of 8 women from the QFNL were contacted, 3 women agreed to participate in an interview.

Current Approach

When asked to describe the QFNL program, participants explained that the program consisted of a support worker working with them in a range of contact modes (face to face, phone, text email) to reduce smoking in both the mother and household. Participants described the program as a holistic multimethod approach in which they were guided to whatever services/resources they needed, this included access to NRT, counselling, out of business hour phone numbers, access to information pamphlets and merchandise. Participants indicated that the program provided strategies to cut down and quit in both the pregnancy and post-natal period. Participants highlighted the 'whole of household' approach, offering support for everyone who needed it within the baby's environment.

Participants found the ongoing support the most helpful part of the program they received. They also mentioned the holistic approach and the access to NRT, in particular inhalers and patches to be beneficial. Other helpful elements of the program included support being non-judgemental, honest and individualised, support worker having first-hand experience, home visiting aspect and support worker help with chemist cooperation when administering NRT.

All of the participants believed that the program helped them remain smoke free or reduce number of cigarettes smoked per day in the post-partum period. Participants also indicated the program assisted with family members maintaining quit or reduction rates. All of the participants indicated that without the program, NRT would be too expensive to maintain. Participants attributed their successful maintenance (quitting or reducing) to the ongoing support they are able to receive in the post-natal period.

Post-Partum Approaches

When asked that contributed to women returning to smoking after their baby is born, participants indicated that stress is the largest factor. Other contributing factors includes body image/weight gain, the assumption of lower risk as the baby is no longer in utero, low levels of awareness and knowledge of passive smoke risks, isolation, boredom, returning to pre-pregnancy routines and social smoking (family and friends).

Participants identified a range of strategies that they think would help mothers to remain smoke free in the post-partum period. The most important strategy was the ongoing support (support in pregnancy that continues into post-partum period), other suggestions included a holistic approach, a whole of household approach, ongoing NRT access. There was one suggestion for a group/mothers group to combat the isolation and boredom risk factor, this could be in an online format. Participants also indicated that the mother also needs to have the drive to quit/open to change. All of the participants indicated that a program like Quit for New Life would work well in the post-natal period.

When asked about what particular models would be most effective in helping women to remain smoke free in the post-partum period all of the participants agreed that incentives would be very popular and would definitely increase participation in a program. Participants suggested that incentives based around the baby e.g. nappies, voucher for baby stores would be a good approach. Incentives were seen as an added financial benefit to quitting smoking i.e. cost of cigarettes. Participants highlighted limitations with self-reported smoking status verses smokalizer qualification

for the incentive and suggested a mix of both. Other potentially effective models discussed included holistic approaches and those which included the whole of the house/family.

Recommendations

For policy and practice

- The literature and interviews suggest that the most effective models of care in smoking cessation for pregnant and post-natal women involve a combination approach. A combination of counselling, incentives, health education, support worker and whole of household would be best.
- The current District supported QFNL program is a holistic, support worker and whole of household approach which we recommend should be scaled up to all women across SWSLHD. Interviews have shown that this program is received well by clients.
- Any future practice should not only focus on the post-partum period as this is not supported by the literature. Programs should be a continuation of antenatal programs that extend to the post-natal period after birth.

For intervention research

- Any future research should not focus only on the postnatal period as it is not supported in the literature and there are limited studies which use post-natal smoking as an outcome. Future research should be on a continuation of antenatal programs, using post-natal smoking as a key outcome.
- Any future research proposals from Population Health should focus on the literature presented and the evidence from the interviews. The evaluation/next phase should focus on strategies which are holistic, include a support worker and take a whole of household approach. This research suggests a combination of strategies is most effective, in particular including counselling, incentives and health education.

References

Boyd KA, Briggs AH, Bauld L, Sinclair L, Tappin D. (2016). Are financial incentives cost-eMective to support smoking cessation during pregnancy?. Addiction. 111(2):360-70.

Bryant J, Bonevski B, Paul C, McElduff P, Attia J. (2011). A systematic review and meta-analysis of the effectiveness of behavioural smoking cessation interventions in selected disadvantaged groups. Addiction. 106(9):1568-85.

Chamberlain, C.; O'Mara-Eves, A.; Oliver, S.; Caird, R. J.; Perlen, M. S.; Eades, J. S.; Thomas, J. (2014). Psychosocial interventions for supporting women to stop smoking in pregnancy. *Cochrane Database of Systematic Reviews.* https://doi.org/10.1002/14651858.CD001055.pub5

Chamberlain C, O'Mara-Eves A, Porter J, Coleman T, Perlen SM, Thomas J & McKenzie JE. (2017) Psychosocial interventions for supporting women to stop smoking in pregnancy (Review). Cochrane Database of Systematic Reviews. Issue 2. Art. No.: CD001055. DOI: 10.1002/14651858.CD001055.pub5.

Coleman-Cowger, V. H. (2012). Smoking cessation intervention for pregnant women: A call for extension to the postpartum period. Maternal and Child Health Journal, 16(5), 937–940.)

Coleman T, Chamberlain C, Cooper S, Leonardi-Bee J. (2011) Efficacy and safety of nicotine replacement therapy for smoking cessation in pregnancy: systematic review and meta-analysis. Addiction. 106(1):52-61.

Dennis, C.L & Kingston, D. (2008). A Systematic Review of Telephone Support for Women During Pregnancy and the Early Postpartum Period. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*. *37*(3), 301-314. https://doi.org/10.1111/j.1552-6909.2008.00235.x.

Department of Health. Pregnancy Care Guidelines - Tobacco smoking Canberra: Commonwealth of Australia; 2019 [cited 2019 31 October]. Available from: https://www.health.gov.au/resources/pregnancy-care-guidelines/part-c-lifestyle-considerations/tobacco-smoking.

DiFranza, J. R., Aligne, C. A., & Weitzman, M. (2004). Prenatal and postnatal environmental tobacco smoke exposure and children's health. Pediatrics, 113(4), (1007–1015.)

Donatelle RJ, Prows SL, Champeau D & Hudson D. Randomised controlled trial using social support and financial incentives for high risk pregnant smokers: Significant other supporter (SOS) program. Tobacco Control, 2000 9(3), III67–III69.

Dornelas EA, Magnavita J, Beazoglou T, Fischer EH, Oncken C, Lando H, Green J, Barbagallo J, Stepnowski S & Gregonis E. (2006) Efficacy and cost-effectiveness of a clinic-based counseling intervention tested in an ethnically diverse sample of pregnant smokers. Patient education and counseling.64(1-3):342-9.

Gadomiski A, Adams L, Tallman N, Krupa N and Jenkins P. Effectiveness of a combined prenatal and postpartum smoking cessation program. Maternal and Child Health Journal, 2011 15(2), 188-197.

Greaves L, Poole N, Okoli C, Hemsing N, Qu A, Bialystok L & O'Leary R. (2011). Expecting to Quit: A best-practices review of smoking cessation interventions for pregnant and post-partum women (2nd ed). British Columbia Centre of Excellence for Women's Health: Vancouver, BC, Canada.

Griffiths, S. E.;Parsons, J.;Naughton, F.;Fulton, E. A.;Tombor, I.;Brown, K. E. (2018). Are digital interventions for smoking cessation in pregnancy effective? A systematic review and meta-analysis. Health Psychology Review. *12*(4), 333-356.

Heil SH, Higgins ST, Bernstein IM, Solomon LJ, Rogers RE, Thomas CS, Badger GJ & Lynch ME. Effects of voucher-based incentives on abstinence from cigarette smoking and fetal growth among pregnant women. Addiction, 2008. 103(6), 1009–1018.

Higgins ST, Heil SH, Solomon LJ, Bernstein IM, Plebani Lussier J, Abel RL, Lynch ME, Badger GJ. A pilot study on voucher-based incentives to promote abstinence from cigarette smoking during pregnancy and postpartum. Nicotine & Tobacco Research 2004 6(6) 1015–1020.

Jiménez-Muro, Adriana ; Nerín, Isabel ; Samper, Pilar ; Marqueta, Adriana ; Beamonte, Asunción ; Gargallo, Pilar ; Oros, Daniel ; Rodríguez, Gerardo. A proactive smoking cessation program in postpartum women. Midwifery, 2013, Vol. 29(3) 240-245.

Jones M, Lewis S, Parrott S, Wormall S, and Coleman T. (2016). Re-starting smoking in the postpartum period after receiving a smoking cessation intervention: A systematic review. Addiction. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26990248

Lavender, T.;Richens, Y.;Milan, S. J.;Smyth, R. M.;Dowswell, T. (2013). Telephone support for women during pregnancy and the first six weeks postpartum. *Cochrane Database of Systematic Reviews.* https://doi.org/10.1002/14651858.CD009338.pub2

McDermott L, Russell A, and Dobson A. Cigarette smoking among women in Australia. (2002) Canberra: Commonwealth Department of Health and Ageing.

Pollack HA. (2001) Sudden infant death syndrome, maternal smoking during pregnancy, and the cost-effectiveness of smoking cessation intervention. American journal of public health. 91(3):432.

Reitzel, L. R., Vidrine, J. I., Businelle, MS, Kendzor DE, Costello TJ, Li Y, Daza P, Mullen PD, Cinciripini PM, Cofta-Woerpel L and Wetter DW. Preventing postpartum smoking relapse among diverse low income women: A randomized clinical trial. Nicotine & Tobacco Research, 2010 12(4), 326–335.

Ruger JP, Weinstein MC, Hammond SK, Kearney MH, Emmons KM. (2008). Cost-effectiveness of motivational interviewing for smoking cessation and relapse prevention among low-income pregnant women: a randomized controlled trial. Value in Health. 11(2):191-8.

Royal Australian College of General Practitioners (RACGP). Supporting smoking cessation: a guide for health professionals. Melbourne: The Royal Australian College of General Practitioners; 2011 [updated July 2014].

South Western Sydney Local Health District (SWSLHD). (2018). Population Health, Health Promotion Close the Gap Quit for New Life (QFNL). Available form: https://www.swslhd.health.nsw.gov.au/populationhealth/PH_Promotion/clsGap_quit.html

Tappin D, Bauld L, Purves D, Boyd K, Sinclair L, MacAskill S, McKell J, Friel B, McConnachie A, de Caestrecker L Tannahill C, Radley A & Coleman T. (2015). Financial incentives for smoking cessation in pregnancy: randomised controlled trial. BMJ. 350:h134.

Trivedi D. (2013) Cochrane review summary: pharmacological interventions for promoting smoking cessation during pregnancy. Primary Health Care Research & Development (Cambridge University Press / UK). 14(4):327-9.

US Department of Health and Human Services. (2006). The health consequences of involuntary exposure to tobacco smoke: A report of the Surgeon General. Atlanta, Georgia: US Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, Available from: http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2006/index.htm