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## CLINICAL GUIDANCE PAPER VVOG

**Title: Traumatic birth experiences and childbirth-related post-traumatic stress disorder: prevention and postpartum care**

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### 1. Objective of this Clinical Guidance paper

This guidance aims to provide recommendations on what obstetric care providers can do to maximally prevent traumatic birth experiences in their patients. Where a traumatic birth experience, however, could not be prevented, a second objective is to provide guidance on the secondary prevention of childbirth-related post-traumatic stress disorder and further postpartum care. Our target audience includes all healthcare providers involved in antenatal, intrapartum, and postnatal obstetrical care (e.g. midwives, gynaecologists, general practitioners, anaesthesiologists, etc.).



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These recommendations are based on the latest available evidence and are adapted to the Belgian, and more specifically, the Flemish regional healthcare system.

## 2. Summary table of recommendations

| Recommendation                                                                                                                                                                             | GRADE (strength of recommendation) | Overall quality of the evidence |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Structural measures                                                                                                                                                                        |                                    |                                 |
| Continuity of care should be maximally guaranteed across the perinatal continuum                                                                                                           | xxx                                | ++                              |
| All healthcare professionals involved in obstetric care across the perinatal continuum should be trained on trauma-informed care (TIC)                                                     | xxx                                | ++                              |
| Obstetric care providers should integrate TIC principles in how they organise their services                                                                                               | xxx                                | ++                              |
| Obstetric care providers and services should work towards an integrated and specific referral system for traumatic birth experiences (TBE) and childbirth related PTSD (CB-PTSD)           | xxx                                | ++                              |
| Birth trauma specific, multidisciplinary clinics or dedicated services can contribute to providing coordinated and specialist support for all patients affected by a TBE                   | xxx                                | +                               |
| Interpersonal measures                                                                                                                                                                     |                                    |                                 |
| Universal, antenatal mental health screening should be offered to all pregnant patients to identify potential risk factors and facilitate timely referral where appropriate                | GCP                                | -                               |
| We suggest discussing birth preferences in all pregnant patients before 36 weeks latest, as part of routine antenatal counselling                                                          | xxx                                | +                               |
| We recommend respectful, person-centred maternity care and responsive communication                                                                                                        | xxxx                               | ++                              |
| Pain relief should be proactively discussed antenatally and should be routinely offered intrapartum                                                                                        | GCP                                | ++                              |
| When feasible, locoregional anaesthesia should be preferred over general anaesthesia for an emergency caesarean section                                                                    | GCP                                | -                               |
| We recommend offering the opportunity to review the birth experience after delivery, without explicitly asking for negative emotions or thoughts and preferably within 72 hours postpartum | xxxx                               | ++                              |
| Positive, trauma-informed screening for TBE direct postpartum should lead to a stepwise follow-up for CB-PTSD symptoms at six weeks postpartum and timely referral                         | xxx                                | +                               |



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Table 1. Summary of recommendations

| Grade (strength of recommendation) |                          | Overall quality of the evidence |                     |
|------------------------------------|--------------------------|---------------------------------|---------------------|
| xxxx                               | Strong for               | ++++                            | High                |
| xxx                                | Weak/Conditional for     | +++                             | Moderate            |
| xx                                 | Weak/Conditional against | ++                              | Low                 |
| x                                  | Strong against           | +                               | Very low            |
| GCP                                | Good clinical practice   | -                               | No obvious/indirect |

Table 2. Symbols used for recommendations and evidence



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### 3. Abbreviations

|           |                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------|
| AAFP      | American Academy of Family Physicians                                                                           |
| ACOG      | American College of Obstetricians and Gynaecologists                                                            |
| AGREE     | Appraisal of Guidelines for Research and Evaluation                                                             |
| CEBAM     | Belgian Centre for Evidence-Based Medicine                                                                      |
| CB-PTSD   | Childbirth related Post-Traumatic Stress Disorder                                                               |
| CBT       | Cognitive Behavioural Therapy                                                                                   |
| CEQ2      | Childbirth Experience Questionnaire                                                                             |
| CI        | Confidence Interval                                                                                             |
| City BiTS | City Birth Trauma Scale                                                                                         |
| CG        | Clinical Guidance                                                                                               |
| COPE      | Centre of Perinatal Excellence                                                                                  |
| DSM-5     | The Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (5th edition) |
| EBCOG     | European Board and College of Obstetrics and Gynaecology                                                        |
| EMDR      | Eye Movement Desensitisation and Reprocessing                                                                   |
| FIGO      | International Federation of Gynaecology and Obstetrics                                                          |
| FMS       | Federatie Medisch Specialisten                                                                                  |
| GDG       | Guideline Development Group                                                                                     |
| IMH       | Infant Mental Health                                                                                            |
| LGBTQIA+  | Lesbian, gay, bisexual, trans, queer, intersexual, and/or asexual and other                                     |
| MOET      | Managing Obstetric Emergencies and Trauma                                                                       |
| NICE      | National Institute for Health and Care Excellence                                                               |
| NICU      | Neonatal Intensive Care Unit                                                                                    |
| NVOG      | Nederlandse Vereniging voor Obstetrie en Gynaecologie                                                           |
| OR        | Odds Ratio                                                                                                      |
| RANZCOG   | Royal Australian and New Zealand College of Obstetricians and Gynaecologists                                    |
| PDI       | Peritraumatic Distress Inventory                                                                                |
| PICO      | Population, Intervention, Comparison, Outcome                                                                   |
| PPH       | Postpartum haemorrhage                                                                                          |
| PTSD      | Post-Traumatic Stress Disorder                                                                                  |
| RCOG      | Royal College of Obstetricians and Gynaecologists                                                               |
| RCT       | Randomised Controlled Trial                                                                                     |
| RMC       | Respectful Maternity Care                                                                                       |
| RR        | Relative Risk                                                                                                   |
| SMFM      | Society for Maternal-Foetal Medicine                                                                            |
| TBE       | Traumatic Birth Experience                                                                                      |
| TIC       | Trauma-Informed Care                                                                                            |
| VBOV      | Vlaamse Beroepsorganisatie van Vroedvrouwen                                                                     |
| VVOG      | Vlaamse Vereniging voor Obstetrie en Gynaecologie                                                               |
| VWV       | Vlaamse Werkgroep Verloskunde                                                                                   |
| WHO       | World Health Organisation                                                                                       |



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## 4. Background

Childbirth is widely regarded as a transformative life event, often associated with feelings of great joy and happiness. However, for a significant proportion of birthing people, birth may turn into a more negative or even traumatic experience and can secondarily lead to the development of childbirth-related posttraumatic stress disorder (). Traumatic birth experiences (TBE) and CB-PTSD are a rising global concern due to its widespread prevalence and wide-ranging impact on birthing people and their families (1). There is emerging evidence about the diagnosis, risk factors, prevention, and treatment of TBE and CB-PTSD. However, practical guidelines on the topic are lagging. This clinical guidance aims to provide evidence-based recommendations for obstetric care providers on the primary prevention of TBE and secondary prevention of CB-PTSD and postpartum care when a TBE could not be prevented.

Various terms are used to describe TBE, and no clear consensus definition exists. PTSD on the other hand, is defined by eight well-established criteria in the DSM-5 (2). Criterion A defines trauma as exposure to actual or threatened death, serious injury, or sexual violence (through direct experience, witnessing, or learning that such an event occurred). However, birth can still be experienced as traumatic without fulfilling DSM-5 Criterion A (3).

Therefore, this guidance defines a TBE as *any* birth – preterm or full term, low or high risk, still- or livebirth – that is subjectively experienced as psychologically traumatic, regardless of the delivery course and whether the birth experience meets DSM-5 criterion A or not. As criterion A of the DSM-5 definition of PTSD more generally encompasses the concept of breached physical integrity, situations where the birth itself was not experienced as psychologically traumatic, but where the direct, physical postpartum consequences were, should also be included in this definition. This definition contributes to the conceptualisation of a TBE as a precursor or mediator of CB-PTSD, consistent with international guidelines (4) and qualitative evidence on lived experiences of birth trauma (5).

Although TBE and obstetric violence may share similar outcomes and are often confused or used interchangeably (6), our definition focuses on the subjective, psychological trauma arising from any childbirth or peripartum experience and acknowledges that TBE can also occur when respectful maternity and trauma-informed care principles have been maximally applied. Disrespectful maternity care or obstetric violence should however remain considered as a potential, independent risk factor for TBE and CB-PTSD (6).

Among the remaining PTSD criteria, besides criterion A, four describe symptom clusters:

- Criterion B: Re-experiencing the traumatic event
- Criterion C: Avoidance of reminders of the event
- Criterion D: Negative alterations in mood and cognition
- Criterion E: Hyperarousal and reactivity

Each symptom cluster requires a minimum number of symptoms to establish a diagnosis of PTSD. The remaining criteria (F, G, and H) address symptom duration, impact on functioning, and exclusion of other causes (2). Spontaneous remission of PTSD symptoms is possible and can occur within 1 month in 44% of affected people. Symptom duration of at least 1 month is therefore stated as a diagnostic criterion by the DSM-5 (1,3).

Traumatic birth experiences and CB-PTSD are substantial contributors to maternal, perinatal, and infant morbidity. The most reported consequences include (3,7):

- Maternal mental health



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- o Psychological and/or psychiatric comorbidities like anxiety or depressive symptoms or disorder
  - o Lower self-esteem
- Breastfeeding challenges
- Future reproductive choices
  - o Fear of subsequent births, avoidance of future pregnancies
  - o Elective caesarean section on request in a subsequent pregnancy
- Relationship problems: lack of support from the partner, sexual dysfunction
- Evidence on child development and impact on infant mental health (IMH) and the parent-infant interaction so far remains contradictory

There are currently no epidemiological data available on the incidence of TBE or CB-PTSD in Flanders or Belgium. The Dutch association for Obstetrics and Gynaecology (i.e. *Nederlandse Vereniging voor Obstetrie en Gynaecologie, NVOG*) guideline reports that between 9 –21% of people giving birth in the Netherlands go through a TBE. Approximately 10–13% develops CB-PTSD, corresponding to a postpartum PTSD prevalence of 1.2–2.1% (3). Globally, prevalence rates of CB-PTSD range from 3-4% in unselected populations to 16-19% in high-risk populations (3).

The lack of a consensus on how to define TBE and the frequently inaccurate use of the term (CB-)PTSD could explain the heterogeneity in reported prevalence rates. Furthermore, postpartum PTSD is not always childbirth-related (e.g., pre-existing PTSD or PTSD related to other traumatic events than childbirth). This distinction is often not made in the literature, which may affect reported prevalence rates (1).

In addition, partners may experience significant psychological distress following childbirth, although their experience consistently remains understudied or overlooked in international guidelines and clinical practice. The limited available evidence suggests substantial mental health concerns among birthing partners during the perinatal period (7).

TBE and CB-PTSD can occur in any birthing person; however, numerous risk factors have been identified in the literature to aid the recognition of individuals at increased risk. The most reported risk factors include (3, 7):

| Antenatal factors   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <ul style="list-style-type: none"><li>o Complicated pregnancy: pre-eclampsia, HELLP syndrome, complications requiring increased monitoring</li><li>o Prior mental health history</li><li>o Previous experience of trauma: childhood abuse, sexual abuse, domestic violence, prior traumatic birth</li><li>o Inadequate coping strategies</li><li>o Migration background, social and cultural expectations</li><li>o LGBTQIA+ parents</li><li>o Birth expectations: strong desire to adhere to a birth plan, fear of childbirth</li><li>o Gynaecological history: vulvodynia, vaginismus</li><li>o Sociodemographic factors:<ul style="list-style-type: none"><li>▪ Adolescent pregnancy</li><li>▪ Geographic region</li></ul></li></ul> |
| Intrapartum factors |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>o Complicated delivery: emergency caesarean section, instrumental delivery, PPH, preterm delivery</li><li>o Neonatal complications, NICU admission of the newborn</li><li>o Fetal demise or perinatal mortality</li><li>o Feelings of powerlessness or loss of control</li><li>o Extreme pain</li><li>o Negative interactions with healthcare providers: perception of hostile or uncaring staff (i.e. obstetric violence or disrespectful maternity care)</li></ul> |
| Postpartum factors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"><li>o Physical birth injury</li><li>o Poor postpartum pain management</li></ul>                                                                                                                                                                                                                                                                                                                                                                                          |

Table 3. Risk factors for TBE and CB-PTSD

In conclusion, all birthing people - regardless of their baseline risk - may experience their birth as traumatic and develop CB-PTSD. Therefore, this guidance aims to include all pregnant people within its target population and does not distinguish between specific low- or high-risk populations. Antenatal screening for a person's actual risk of having a TBE or developing CB-PTSD was left out of the scope of this guideline given the current evidence gaps on if, how, when, and who to screen. The clinical guidance panel determined that all birthing people have the right to a trauma-informed approach by any of their obstetric care providers. Accordingly, this guidance has been developed as a multidisciplinary commitment to preventing TBE and CB-PTSD in all birthing people, regardless of their baseline medical or psychological risk, and providing adequate postpartum care in case a TBE could not be prevented.



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## 5. Evidence

The development of the guidance followed the standard methodology described by the Clinical Guidance Project of the Flemish association for Obstetrics and Gynaecology (i.e. *Vlaamse Vereniging voor Obstetrie en Gynaecologie, VVOG*).

### 5.1 Clinical Guidance Panel

This guidance was developed by a multidisciplinary panel, supported by an external stakeholder group. A team of gynaecologists and midwives represented the central, guideline development group (GDG). The external stakeholder group included an anaesthesiologist, a general practitioner, a psychologist, a psychiatrist, and two experts with lived experience. Additional ethical clearance was obtained by the ethics committee of the Antwerp University Hospital (i.e. *Universitair Ziekenhuis Antwerpen, UZA*) to involve two patient representatives in the external stakeholder group as experts with lived experience. The external stakeholder group participated in defining the priority guideline questions and in the discussion and finalisation of the recommendations. All panel members are listed under “13. Members of the Clinical Guidance panel”.

### 5.2 Identifying priority questions and outcomes

To define the scope of the guidance, a technical consultation with the guideline development group and relevant stakeholders was first held. The panel agreed to focus on more preventive measures in the antenatal, intrapartum and postpartum period to specifically support obstetric care providers in their everyday practice. Specific psychological or psychiatric interventions for the treatment of CB-PTSD were left outside the scope of this guidance (e.g. psychopharmacological treatment, eye movement desensitisation and reprocessing or EMDR, cognitive behavioural therapy or CBT).

As mentioned before, the panel further decided not to distinguish between low- and high-risk populations for two main reasons:

- Current evidence gaps regarding optimal screening methods, timing, and target populations and implications for trauma informed clinical practice
- *All birthing people* - regardless of their antenatal baseline risk - may experience a traumatic birth and/or develop CB-PTSD

The scoping meeting resulted in nine priority guideline questions, which are listed in Appendix 1. Questions were further individually rated by all panel members. A Likert scale, ranging from “not important” to “very important”. All questions were consistently rated as “important” or “very important” by most panel members.

### 5.3 Sources of evidence

The GDG was responsible for the identification, retrieval, quality assessment, and grading of the evidence, and formulating the recommendations based on the retrieved and graded evidence.

First, relevant existing guidelines in English or Dutch from 2017 onwards were searched by conducting a literature search in PubMed and consulting international guideline organisations and obstetric associations:

- American Academy of Family Physicians (AAFP)
- American College of Obstetricians and Gynecologists (ACOG)
- European Board and College of Obstetrics and Gynaecology (EBCOG)
- International Federation of Gynecology and Obstetrics (FIGO)



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- Federatie Medisch Specialisten (FMS)
- National Institute for Health and Care Excellence (NICE)
- Nederlandse Vereniging voor Obstetrie en Gynaecologie (NVOG)
- Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG)
- Royal College of Obstetricians and Gynaecologists (RCOG)
- Society for Maternal-Fetal Medicine (SMFM)
- World Health Organization (WHO)

Six guidelines were identified based on topic or theme relevance. Each retrieved guideline was then independently appraised by two members of the GDG using the Appraisal of Guidelines for Research and Evaluation (AGREE) II instrument (8), except for the NICE guideline, as this guideline is already fully accredited by the Belgian Centre for Evidence-Based Medicine (CEBAM). Appraisal outcomes are available from the corresponding author upon request. Four guidelines were determined to be of adequate quality and apt for inclusion for this guidance:

- WHO: Intrapartum care for a positive childbirth experience (9)
- NICE: Antenatal and postnatal mental health: clinical management and service guidance (4)
- NVOG: Bevallingsgerelateerde posttraumatische-stressstoornis (PTSD) en posttraumatische-stressstoornisklachten (PTSD-klachten) (3)
- Centre of Perinatal Excellence (COPE): Mental Health Care in the Perinatal Period: Australian Clinical Practice Guideline (7)

Their applicability to the regional health system of Flanders, Belgium was evaluated by using the ADAPTE manual and resource toolkit (10). The ADAPTE process outcomes are again available from the corresponding author upon request.

Although the included guidelines were considered as high quality guidelines, the panel concluded they did not always address the identified priority questions. Most guidelines either primarily provided more general recommendations on positive birth experiences or perinatal mental health, rather than specific guidance on TBE or CB-PTSD prevention, or already appeared to be outdated with the recent, rapid increase in studies on TBE and CB-PTSD.

An additional systematic review of the literature was therefore undertaken. The databases Medline/PubMed and Embase were searched for evidence published from 1 January 2017 onwards, following CEBAM expert consensus. The search was conducted on the 20<sup>th</sup> of December 2025. Publications were restricted to English and Dutch. A total of 1143 records were identified. After removal of duplicates, 981 articles were screened by title and abstract. Of these, 125 articles were deemed eligible for full text screening. Full text screening was conducted by two independent reviewers with a third independent reviewer as conflict resolver and resulted in the inclusion of 32 studies. Inclusion and exclusion criteria can be found in appendix 2. Nine additional articles were identified through snowballing. An overview of the literature search strategy and accompanying PRISMA statement can be found in appendix 3. Appendix 4 further provides an overview of included article types and priority questions themes covered: birth trauma definition, interpersonal and structural interventions or measures. Both appendices highlight a strong, epidemiological evidence base, with a substantial, although smaller, body of work on preventive and supportive interventions.

#### 5.4 Formulation of recommendations



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The GRADE approach (11) was used to appraise the quality of evidence for every priority guideline question. GRADE was equally used in assisting to formulate the strength of each recommendation.



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## 6. Recommendations

### 6.1. Structural measures

| Recommendation                                                                   | Grade (strength of recommendation) | Overall quality of the evidence |
|----------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Continuity of care should be maximally guaranteed across the perinatal continuum | xxx                                | ++                              |

#### Evidence (++)

All included guidelines recommend ensuring continuity of care, wherever possible, as an overarching best practice in perinatal mental healthcare, both on the direct, interpersonal level between care provider and patient, and on a more structural level in coordinating referral to specialist services. The WHO (9) and COPE (7) guidelines mention midwifery-led care across the perinatal continuum as a specific continuity-of-care model that has been well-documented in increasing the likelihood of a positive childbirth experience. None of the included guidelines, however, recommend a specific continuity-of-care model to reduce the likelihood of patients having a TBE or developing CB-PTSD. The FMS guideline (3) also recommends continuous one-on-one labour support and specifically mentions the option of involving a trained companion who does not perform medical interventions (e.g. doula).

The evidence base further supports consistent benefit on experience-related outcomes and trauma mediators but lacks causal evidence on PTSD/TBE incidence as primary outcome. Most evidence consists of observational studies, qualitative research, and secondary analyses of trial cohorts. One lower quality RCT with small study samples found a significant, positive impact on individual DSM-5 PTSD criteria, but no significant differences were demonstrated on the incidence of people fulfilling all seven PTSD criteria (12).

Heterogeneity in provider characteristics also complicate evidence-based recommendations on the direct reduction of TBE and CB-PTSD rates as different continuous support providers have been studied, going from people from within the patient's social network (e.g. partner), to hospital staff (e.g. midwife, obstetrician), or people from outside the hospital and outside of the patient's social network (e.g. doula). In a Cochrane Systematic Review (13) one of the included articles refers to continuous support during childbirth seemed most effective in reducing the likelihood of a negative childbirth experience when the provider was neither a staff member nor part of the patient's social network (13). A more recent systematic review and meta-analysis by Taheri et al. underlined physical presence and emotional support as the common point in all studied continuous intrapartum support and reported that support from a (trained) person in a close relationship with the patient was more effective in promoting a positive birth experience than a hired companion (14). Both the Cochrane systematic review and the meta-analysis by Taheri et al. did not report on our primary outcomes of TBE and CB-PTSD specifically.

#### Recommendation (xxx)

We suggest guaranteeing maximal continuity of care across the antenatal, intrapartum and postpartum period, wherever feasible, and avoid fragmented care. If the capacity for continuous, one-on-one labour support is limited by the local organisational context, allowing the patient to bring a (trained) continuous support provider who is neither a staff member nor part of their own social network should be regarded as an evidence-based measure in reducing the likelihood of a negative childbirth experience.



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| Recommendation                                                                                                                         | Grade (strength of recommendation) | Overall quality of the evidence |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| All healthcare professionals involved in obstetric care across the perinatal continuum should be trained on trauma-informed care (TIC) | xxx                                | ++                              |

### Evidence (++)

All included guidelines agree on the importance of training obstetric healthcare providers on trauma informed care (TIC), although each guideline approaches the content of this training from a different, mostly consensus-based perspective. The COPE guideline (7) recommends training all care providers on parent-centered communication, psychosocial assessment and culturally safe care, whereas the NICE guideline (4) highlights the need for training on existing local care pathways and referral routes. The WHO (9) mentions regular, practice-based respectful maternity care (RMC) training as a main resource requirement for RMC provision. The Dutch FMS guideline (3) specifies that both local teaching and existing academic curricula should include education on PTSD risk factors, symptoms and health consequences as well as on interpersonal interventions that positively affect a person's birth experience.

Existing evidence is primarily derived from qualitative studies, observational research, scoping and expert reviews, and consensus-based frameworks linking care providers' behavior and communication to birth experience outcomes (15). Experimental studies evaluating the causal inference of training as an effective intervention in reducing CB-PTSD rates are limited.

Although multiple theories on posttraumatic stress can inform perinatal practice, the selected evidence base mainly refers to TIC in the obstetric care context as care based on "4 R's" (16-18):

1. **Realise** that (birth) trauma exists and understand pathways for recovery
2. **Recognise** physical, mental health and behavioural symptoms and risk factors
3. **Respond**
4. **Resist** retraumatisation

Applying these four principles will help obstetric care providers to become more "trauma-aware" and identify pregnant and birthing people carrying potential traumatic experiences and offer timely and tailored support (16,19). It will also help care providers to critically analyse the obstetric services provided in their local teams and care organisations to prevent (re-)traumatisation wherever possible and respond where trauma could not be prevented (16-18).

We further refer to the VVOG RMC charter for further background on RMC principles (20).

### Recommendation (xxx)

We suggest providing TIC training for all care providers involved in obstetric care (i.e. general practitioners, physiotherapists, nurses, midwives, gynaecologists, anaesthesiologists, neonatologists) to improve recognition of psychological vulnerability, promote respectful and emotionally safe care, and reduce mediators of childbirth-related trauma.



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According to the existing, international guideline-based consensus we recommend providing training on:

- Birth trauma and CB-PTSD risk factors, symptoms and health consequences
- Interpersonal measures: psychosocial assessment, communication, birth trauma recognition and coordinated and patient consent-based referral in accordance with local care pathways
- Integrating TIC and RMC principles in daily practice

We further recommend to not only target medical, midwifery or nursing students, interns or trainees, but especially also practicing obstetric care providers. Training should preferably be held on a regular basis, be case- and practice-based, and target all disciplines involved in the local obstetric care team. A consensus-based example can be to integrate TIC and RMC criteria in managing obstetric emergencies and trauma (MOET) or “skills and drills” trainings, that are already widely implemented across the Belgian obstetric healthcare context.

| Recommendation                                                                               | Grade (strength of recommendation) | Overall quality of the evidence |
|----------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Obstetric care providers should integrate TIC principles in how they organise their services | xxx                                | ++                              |

### **Evidence (++)**

Organisations that provide obstetric care (e.g. hospital, birthing homes, etc.) should aim to facilitate a working environment and infrastructure that allows care providers to apply and integrate TIC and RMC principles in their day-to-day services. The WHO (9) is the only included guideline that specifies the main resources required for obstetric care organisations to provide RMC, targeting both low-, middle- and high-income care settings. None of the other included guidelines provide any further recommendations on how to integrate TIC principles specifically in local care services and to what extent this affects the likelihood of having a TBE or developing CB-PTSD.

Evidence is largely derived from observational studies, qualitative research, and synthesis papers linking organisational conditions to birth experience and trauma-related outcomes. A Swedish qualitative study based on the written responses to open-ended online questions of 112 women with low ratings of their childbirth experience for example concretised how bad facilities and poor organisation negatively impacted their birth experience in three recurrent subthemes: crowded and stressful circumstances, separation, environment and technology (21). Giving birth on a busy day was perceived to delay care or treatment (e.g. vaginal examination, pain relief, instrumental vaginal delivery, or caesarean section). Frequent exchanges of midwives, midwives not being as present as wished for, as well as worries for the midwives' wellbeing during busy shifts were also reported to negatively affect their experience (21). Separation after birth of their newborn and/or their partner after a surgical procedure and equipment or appliances not working properly or inadequate design of birthing rooms were further reported (21). ACOG expert consensus further exists on how allowing people who desire immediate skin-to-skin contact with their newborn during or after a caesarean section may contribute to reducing CB-PTSD symptoms (15). Interventional studies evaluating the impact of specific organisational measures on CB-PTSD as a primary outcome remain however limited.

### **Recommendation (xxx)**



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We suggest optimising how local obstetric care and intrapartum services are organised to improve emotional safety, communication and respectful care during labour and reduce the likelihood of patients having TBE and/or developing CB-PTSD. Leadership investment in adequate staffing, healthy working conditions and structured workflows that involve birthing partners and avoid separation whenever feasible and safe is needed for care providers to be able to apply and integrate TIC principles in their day-to-day services.

Local context-specific and incremental or phased implementation may improve the feasibility of reaching an organisational structure that maximally allows for TIC, continuous support and RMC. Organisational reforms should further include perspectives of local care teams and ideally birthing people themselves to allow for priority identification.

| Recommendation                                                                                                                                                                   | Grade (strength of recommendation) | Overall quality of the evidence |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Obstetric care providers and services should work towards an integrated and specific referral system for traumatic birth experiences (TBE) and childbirth related PTSD (CB-PTSD) | xxx                                | ++                              |

### Evidence (++)

Of the included international guidelines, the NICE, COPE and FMS guidelines (3-7) have developed specific recommendations on appropriate referral pathways. The NICE guideline recommends developing clear referral and management protocols for obstetric care providers across all levels of existing stepped-care frameworks for perinatal mental health problems and underlines the importance of effective information transfer and continuity of care (4). A concrete measure to achieve continuity of care in case of a referral is alerting the patient's general practitioner when a patient is referred.

When someone is referred during pregnancy or in the postnatal period, the NICE guideline recommends them to be assessed by a specialist service within two weeks of referral and treatment is initiated within one month of initial assessment (4). Although these recommendations do not target people with a TBE or CB-PTSD specifically, the more overarching scope of these recommendations on referral in case of "perinatal mental health problems" favours an integrated, stepped-care approach (4).

The COPE guideline (7) specifies that patients experiencing psychosocial risk factors (including a history of childhood sexual abuse, domestic violence, high trait anxiety, perfectionism or need for control), previous traumatic birth, depression, anxiety or other co-occurring mental health conditions, should already be linked with appropriate assessment and treatment services during pregnancy to reduce the risk of (re-) experiencing psychological birth trauma.

The FMS guideline (3) further adds specific recommendations on a stepped-care referral pathway for patients in the postnatal period with a TBE and a suspicion of CB-PTSD, in line with the overarching principles of the NICE guideline (4). Patients should be directed to a specialist care provider with expertise in PTSD diagnosis and treatment whenever their symptoms have a negative impact on their daily functioning.

Most of the included evidence is again derived from scoping reviews, service design and implementation report, observational and qualitative research. Comparative evidence (e.g. before-after or randomised controlled designs) on TBE or CB-PTSD rates after pathway implementation is limited.



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## Recommendation (xxx)

We suggest developing and implementing a structured referral pathway for pregnant people identified with psychological vulnerability, trauma exposure or early symptoms of birth-related trauma. Clear referral criteria, defined roles, and access to appropriate psychosocial and specialist services may improve timely support and continuity, potentially reducing the risk of childbirth-related trauma and postpartum posttraumatic stress symptoms.

Antenatal referrals can be made in case of psychosocial risk factors or previous traumatic birth after appropriate assessment. Postnatal referrals to specialist services should be done when psychological symptoms following a TBE have a negative impact on the patient's daily functioning. Assessment by the specialist service should occur within two weeks after referral and initiation of treatment within one month after assessment.

Referrals must always occur only with the patient's full informed consent. Capacity planning and a stepped-care approach can further facilitate implementation of a sustainable referral system. Organisations implementing specialist referral pathways should consider potential barriers for socio-economically vulnerable groups (financial, transport and language barriers).

| Recommendation                                                                                                                                                           | Grade (strength of recommendation) | Overall quality of the evidence |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Birth trauma specific, multidisciplinary clinics or dedicated services can contribute to providing coordinated and specialist support for all patients affected by a TBE | xxx                                | +                               |

## Evidence (+)

None of the included guidelines mentions the role of multidisciplinary, birth trauma specific services or clinics in specifically reducing the risk of developing CB-PTSD after a TBA. The NICE guideline focuses on inpatient specialist care and mentions rather generally that each perinatal mental health network should include designated inpatient services, so called "mother and baby units", covering a population where there are 25000 to 50000 live births per year and further tailored to local psychological and psychiatric morbidity rates.

Current evidence is primarily derived from scoping reviews of international guidance and good practices, expert consensus, and descriptive, implementation-focused studies of trauma-informed service models (22). A scoping review of existing, international guidance by Donegan et al. states that specialised birth trauma services are consistently recommended as one-stop places where perinatal mental health teams, social work and counselling services come together to ensure collaboration and comprehensive support, without any mention of how they should concretely be organised (i.e. out- or inpatient or combination of both) (23). Robust comparative studies evaluating different birth trauma clinic models and primary clinical outcomes are lacking.

## Recommendation (xxx)

Although birth trauma specific services may contribute to coordinated, specialised support for people affected by birth-related trauma, we suggest considering their establishment as a later step in a phased implementation of the structural measures listed above. Services should be integrated into the local perinatal mental healthcare system to avoid fragmentation of care.

## 6.2. Interpersonal measures



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| Recommendation                                                                                                                                                              | Grade (strength of recommendation) | Overall quality of the evidence |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Universal, antenatal mental health screening should be offered to all pregnant patients to identify potential risk factors and facilitate timely referral where appropriate | GCP                                | -                               |

### Evidence (-)

The Australian COPE guideline is the only included guideline to recommend routine screening for psychosocial vulnerability factors early in pregnancy to identify pregnant people at risk of TBE and adapt care to reduce their eventual risk of having a TBE or developing CB-PTSD (7). The other included guidelines do not mention any type of antenatal mental health screening for this specific purpose, although the (4) guideline recommends to routinely screen all patients for depression, anxiety and severe mental illness at booking.

There is still limited causal evidence that psychosocial screening reduces perinatal mental health disorders or CB-PTSD. International expert consensus statements however emphasise the importance of identifying psychosocial risk factors during pregnancy, recommending screening for trauma history, mental health conditions, and fear of childbirth as part of trauma-informed maternity care (19,24). Expert consensus by Ayers et al. Also recommends screening non-birthing partners whenever feasible (24).

### Recommendation (GCP)

We suggest offering routine antenatal screening for key psychosocial risk factors, previous traumatic birth and other mental health problems to all patients at booking. Early screening should support timely identification of psychological vulnerability and facilitate appropriate care and referral that may reduce the risk of having a TBE and developing CB-PTSD. Screening should be embedded in a pre-established, more general antenatal mental health screening pathway with clearly defined referral routes to facilitate integrated care.

Routine psychosocial screening allows early identification of pregnant people at increased risk of traumatic birth experiences or postpartum PTSD. While evidence directly demonstrating that screening alone prevents PTSD is limited, identification of psychosocial risk factors enables targeted interventions that have demonstrated benefit in reducing trauma-related symptoms and improving maternal mental health outcomes.

| Recommendation                                                                                                                             | Grade (strength of recommendation) | Overall quality of the evidence |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| We strongly support discussing birth preferences in all pregnant patients before 36 weeks latest, as part of routine antenatal counselling | xxx                                | +                               |

### Evidence (+)

None of the included guidelines specifically recommend discussing birth preferences antenatally to prevent TBE or CB-PTSD, but they all emphasise the importance of respecting the birthing person's autonomy and preferences throughout pregnancy and childbirth.



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There is very little evidence on the discussion of birth preferences and the prevention of TBE/CB-PTSD. Evidence is indirect or embedded within broader psychosocial or counselling interventions (19,25). Antenatal discussion of birth preferences may help clarifying expectations and aligning them with realistic birth scenarios (19). It may further support informed choice and shared decision making, improve maternal preparedness and enhance perceived control during labour. We found two lower quality RCT's, both included in one meta-analysis, and one separate systematic review evaluating "birth plans" as an antenatal intervention affecting childbirth experience, concluding that "birth plans" significantly improve sense of control, higher fulfilment, and overall childbirth experience scores and lower fear of childbirth, depression and PTSD symptoms (19,25,26,27,28). However, a strong desire to adhere to a strict birth plan can also be associated with a higher risk of having a TBE (7).

### **Recommendation (xxx)**

We strongly support the routine, antenatal discussion of birth preferences with all pregnant people, before 36 weeks of gestation latest. Exploring the mothers' preferences in labour and explicit discussion of potential scenarios might contribute to the prevention of traumatic birth experiences by improving maternal preparedness, enhancing perceived control during labour and reducing mismatches between expectations and actual birth outcomes, which are known predictors of postpartum PTSD symptoms.

We further suggest the use of the terms "birth preferences" or "birth wishes" over "birth plan", as they better reflect the unpredictable nature of labour and birth and holds space for informed choices rather than more rigid expectations.

| Recommendation                                                                      | Grade (strength of recommendation) | Overall quality of the evidence |
|-------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| We recommend respectful, person-centred maternity care and responsive communication | xxxx                               | ++                              |

### **Evidence (++)**

Both the WHO and COPE guidelines and included evidence emphasise the importance of respectful, person-centered maternity care, preserving birthing people's dignity, privacy and autonomy, providing continuous support and clear communication and information, and allowing informed choice during labour and childbirth (7,9,24,29). Positive encounters with caregivers, based on mutual trust and respect, can have a protective effect, even in the context of complicated pregnancies and births (24). The European Parliament also recently called for maternity care that respects birthing people's fundamental human and patient rights, including:

- informed consent before medical procedures
- clear communication and information about care options
- respect for people's choices during pregnancy and childbirth
- protection of privacy and dignity in healthcare settings.

### **Recommendation (xxxx)**

To implement a respectful, person-centered maternity care and adequate and responsive communication, we recommend:

- Explicit verbal consent prior to all procedures
- Clear communication and information
- Emotional validation and reassurance



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Within the Belgian legal framework, informed consent and refusal are fundamental patient rights as defined in the Law on Patients' Rights (30). Informed consent should therefore be systematically and explicitly obtained prior to any obstetric intervention during labour and birth. Clear, timely and understandable information regarding the indication, benefits, risks, and possible alternatives of proposed interventions and potential risks in case of refusal should be provided, allowing birthing people the opportunity to ask questions and make their own informed decision. Respecting the birthing person's autonomy and ensuring meaningful participation in decision-making are essential components of respectful, person-centered maternity care.

| Recommendation                                                                                      | Grade (strength of recommendation) | Overall quality of the evidence |
|-----------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Pain relief should be proactively discussed antenatally and should be routinely offered intrapartum | GCP                                | ++                              |

### Evidence (++)

Since pain can strongly influence the subjective birth experience, optimal pain management may help to prevent TBE (31,32). However, none of the included guidelines or studies compared proactive versus on-demand analgesia intrapartum to specifically prevent TBE or CB-PTSD. The WHO guideline does support informed decision-making which involves actively offering pain relief options rather than waiting for birthing people to request them (9). The WHO guideline further emphasises that effective pain management improves satisfaction, maternal experience, and perceived control (9). Expert consensus therefore assigns an important role to anaesthesiologists in TBE and CB-PTSD prevention through providing effective analgesia with minimal complications and trauma-informed care (33).

### Recommendation (GCP)

We suggest that available options of pain relief should be proactively discussed during the antenatal period. This enables timely, informed decision-making, facilitates the discussion of birth preferences, and may reduce the psychological impact of unexpected pain and interventions during delivery. Antenatal referral to an anaesthesiologist may be offered to pregnant people with a previous negative experience with locoregional anaesthesia (e.g. inadequate pain relief, complications). Given that pain can be a determinant for negative or traumatic birth experiences, pain relief preferences (i.e. method and timing) should again be systematically discussed at the beginning of labour or induction.

| Recommendation                                                                                                          | Grade (strength of recommendation) | Overall quality of the evidence |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| When feasible, locoregional anaesthesia should be preferred over general anaesthesia for an emergency caesarean section | GCP                                | -                               |

### Evidence (-)

None of the included guidelines provide any specific recommendations on the method of anaesthesia in an emergency caesarean section setting. No direct evidence that general anaesthesia increases the risk of TBE or CB-PTSD could further be withheld from the included evidence base (34).

An emergency caesarean section in general, conversion from locoregional to general anaesthesia and accidental pain awareness under general anaesthesia are however



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described as independent risk factors for CB-PTSD (33,34,35). General anaesthesia is further associated with an increased risk of postpartum depression and suicidal ideation, although the underlying mechanisms remain unclear for these associations (12,36). On the other hand, inadequate pain relief during caesarean delivery is also directly associated with CB-PTSD (37). Immediate action should be taken when this occurs, and general anaesthesia should be considered whenever necessary (37).

### Recommendation (GCP)

We suggest that locoregional anaesthesia should be performed for an emergency caesarean section whenever feasible and safe. If a patient reports pain, discomfort or distress despite locoregional anaesthesia and additional pain relief, conversion to general anaesthesia should immediately be considered to prevent TBE and CB-PTSD. TIC principles and transparent communication remain of utmost importance in these decisions, even in emergency settings.

| Recommendation                                                                                                                                                                             | Grade (strength of recommendation) | Overall quality of the evidence |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| We recommend offering the opportunity to review the birth experience after delivery, without explicitly asking for negative emotions or thoughts and preferably within 72 hours postpartum | xxxx                               | ++                              |

### Evidence (++)

Available data on direct postpartum screening for TBE as an interpersonal measure for secondary prevention of CB-PTSD is limited. The available evidence consists mainly of observational risk factor studies, validation studies and again expert consensus with no comparative evidence. Direct postpartum screening is however considered to have a mediating role in the risk for developing CB-PTSD by facilitating early support and timely referral (1,15,19,38-40). Different methods for postpartum screening have been described, ranging from structured, yet often not validated screening tools to postpartum debriefing.

The Peritraumatic Distress Inventory (PDI) can for example be adapted to childbirth and has been shown to have high sensitivity and specificity to identify people at risk of CB-PTSD (41,42). The Childbirth Experience Questionnaire (CEQ2) is another comprehensive screening tool that covers many qualitative aspects of childbirth but remains to be validated for international use (14,26,31).

"Postpartum debriefing" is usually used in the literature for two different types of interventions. It might refer to an intervention based on the principles of critical incident stress debriefing (CISD), a structured, stepwise intervention (3). On the other hand, debriefing is sometimes used for what is also called "birth review." This generally involves an extensive conversation with an obstetric care provider, usually starting with an open question on the birth experience and during which the provider can provide further explanations and answer questions (3). Another recurring example in the included evidence is asking people to write down a short narrative of their birth as a support for actively discussing their experience (35,38,39,40,43).

The NICE, COPE and FMS guidelines recommend that people who just gave birth should be given the opportunity to talk about their experience, only if they desire to do so and using a supportive listening approach rather than a structured trauma intervention (3,4,7,9). The



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NICE and COPE guidelines explicitly advise against the traditional debriefing method or CISTD as a single-session trauma-focused intervention that involves reliving the event, as it may sometimes worsen symptoms and increase distress (4,7).

Great heterogeneity exists between studies that evaluate birth debriefing methods (type of study participants, type of intervention, timing of assessment, use of questionnaires, scales and outcome measures, etc.). According to the systematic review of De Graaff et al. (43), debriefing did not lead to fewer cases of CB-PTSD or PTSD symptoms in an unselected population. Debriefing interventions might cause less PTSD symptoms four months after delivery in a selected group of people who reported a TBE or were at risk of experiencing one (43). A systematic review and meta-analysis by Dekel et al. however add that people with medical interventions during childbirth reported more negative perceptions of their birth experience after early debriefing (44). Likewise, two sessions (i.e. at 10 days and 10 weeks postpartum) after complicated deliveries yielded no better results (44). An Australian, retrospective cross-sectional study on the other hand showed that people who did not report a subjective TBE, but who were offered an early birth debriefing had an improved perception of their birth experience compared to those who did not receive a birth debriefing (45).

### Recommendation (xxxx)

We recommend offering all people who just gave birth the opportunity to review their birth experience soon after delivery (e.g. during the maternity stay or within the first few days postpartum, ideally within 72 hours), using an open and supportive approach. Potential negative consequences are likely to be minimal if this review remains a brief, trauma-informed and, most importantly, voluntary conversation. Care providers should therefore first obtain consent and should then initiate this conversation with a neutral, open-ended question (e.g. “How do you look back on your birth experience?”). Care providers should avoid directing people towards negative emotions or traumatic interpretations.

The panel, with specific input of the experts with lived experience, also recommends an open conversation over taking a structured questionnaire or screening tool. The aim is to provide people with the opportunity to reflect on and discuss their experience if they desire to do so, without assuming that the birth was traumatic. An essential condition is that appropriate care, follow-up and timely referral pathways are available when offering the opportunity to review birth experiences.

Examples of appropriate questions are:

- “How did you experience the birth?”
- “How are you feeling when you think back of the birth now?”

| Recommendation                                                                                                                                                     | Grade (strength of recommendation) | Overall quality of the evidence |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|
| Positive, trauma-informed screening for TBE direct postpartum should lead to a stepwise follow-up for CB-PTSD symptoms at six weeks postpartum and timely referral | xxx                                | +                               |

### Evidence (+)

Both the FMS guideline (3) and a more recent expert review (1) suggest a two-stage screening and referral process starting from identifying people who report having had a TBE shortly after birth and who are thus subsequently at risk for developing CB-PTSD in a later



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stage. The second step is then screening for CB-PTSD symptoms, at least four weeks postpartum as a duration longer than four weeks counts as one of the DSM-5 diagnostic criteria (1,15,46).

The literature describes different screening tools that can be used to screen for CB-PTSD. The City Birth Trauma Scale (City BiTS) is the most cited example in the included literature (31,33,35,36,38,44,47), specifically developed to measure childbirth-related PTSD according to the DSM-5 diagnostic criteria. It is a screening tool to identify probable CB-PTSD, but it is not a diagnostic tool (31,33) and remains to be validated in our Flemish and Belgian population.

Further evidence on the best screening and referral algorithm remains limited, with little to no consensus if all people who gave birth should be screened for CB-PTSD symptoms at four weeks postpartum or later, or rather only those who reported a TBE direct postpartum. Good practices learnt from screening for other perinatal psychiatric morbidities like postpartum depressive or anxiety disorders show that structured, stepwise screening methods may also be sensitive for other comorbidities (48,49). The Ghent Network for Perinatal Mental Health stepwise screening algorithm for postpartum depressive and anxiety disorders for example starts with asking four questions to all people who gave birth at six weeks postpartum: two Whooley questions (i.e. depressive symptoms) and two Generalised Anxiety Disorder (GAD-2) questions (48). A positive initial screening is then followed by more extensive screening and diagnostics using the Edinburgh Postpartum Depression Scale (EPDS) or Generalised Anxiety Disorder (GAD-7) (48). Yet, the sensitivity of these screening methods for detecting CB-PTSD symptoms specifically remains to be established.

### **Recommendation (xxx)**

The panel suggests a stepwise screening algorithm for TBE and CB-PTSD. If a person who just gave birth reports a negative or traumatic experience during the early review within 72 hours postpartum, their birth experience should be revisited during the routine postpartum consultation around six weeks postpartum, with additional attention to possible symptoms of CB-PTSD and using a validated screening instrument such as the City Birth Trauma Scale.

If no negative or traumatic experience is initially reported, the panel suggests starting from a more integrated, postpartum mental health screening, again at six weeks postpartum, using validated screening methods like the Ghent Network for Perinatal Mental Health approach. The conversation during this screening should however remain open to further discussion of the birth experience and potential CB-PTSD symptoms. Positive screenings should lead to further clinical assessment, as well as timely and integrated referral to appropriate mental healthcare.



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## 7. Quality control

The international guidelines were evaluated by 2 independent reviewers using the AGREE II and the ADAPTE tool. This was also cross-checked by generative AI (ChatGPT). A draft clinical guidance paper was made public to all members of the VVOG and the Flemish Professional Organization of Midwives (i.e. *Vlaamse Beroepsorganisatie van Vroedvrouwen*, VBOV) for review and comments before final publication. The final version of this guidance was subsequently approved by the VVOG/Flemish Working Group on Obstetrics (i.e. *Vlaamse Werkgroep Verloskunde*, VWV).

## 8. Sponsorship and conflicts of interest

The authors declare that they have no competing financial interests or personal relationships that could have affected the work reported in this paper.

## 9. Declaration of AI

The authors used ChatGPT as generative AI tool for cross-checking AGREE II and ADAPTE appraisals, literature search and review, evidence synthesis and language. AI generated content was consistently cross-checked by the authors and adapted where necessary. The authors take full responsibility for the content of this publication.

## 10. Implementation

This guideline will be published in EJOG, Gynaïkeia (official journal of the VVOG) and the Midwifery Journal (i.e. *Tijdschrift voor Vroedvrouwen*). The guideline will likewise be published online on the website of the VVOG (accessible to all VVOG members) and the website of the VBOV (accessible to all VBOV members).

## 11. Suggestions for further scientific research

The current evidence base on effective interventions to prevent TBE and CB-PTSD remains limited and highlights several priorities for future research.

First, greater conceptual clarity is required. The literature uses various terms to describe traumatic birth experiences, and no consensus definition currently exists. Developing standardised definitions and outcome measures would improve comparability between studies and support the development of more practical, evidence-based guidelines.

Second, there are currently no epidemiological data available on the incidence/prevalence of TBE or CB-PTSD in Flanders or Belgium. Epidemiological studies are needed to provide the necessary data to be able to conduct further research in prevention of TBE and CB-PTSD.

Third, more robust, comparative, and prospective study designs are needed. Much of the available evidence is based on observational, qualitative, or implementation reports, whereas randomised or controlled studies remain scarce. Future research should evaluate the effectiveness of TIC and RMC training, including optimal training content, intensity, and long-term impact on maternal mental health outcomes such as CB-PTSD. Cluster-randomised and longitudinal studies could also assess the combined impact of training and organisational measures within maternity care systems.

Further research is needed on models of care, including provider characteristics and continuity-of-care models, both in physician- and midwife-led systems. In addition, evidence evaluating screening strategies, birth trauma clinics, and referral pathways remains limited. Prospective comparative studies and implementation research are needed to determine their effectiveness, cost-effectiveness, and impact on CB-PTSD outcomes.



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## 12. Limitations

Several limitations should be considered when interpreting the recommendations in this guideline.

First, the evidence base for interventions aimed at preventing TBE and CB-PTSD remains limited. For many interventions, there is insufficient evidence to establish clear causal relationships between the intervention and the prevention of the primary outcomes defined by this guideline. Most of the available literature consists of observational studies, qualitative research, or expert consensus, which provide valuable, and often patient reported insights but are inherently limited in their ability to demonstrate causality.

Second, when empirical evidence is available, its methodological quality is often low to moderate. Studies frequently vary in their definitions and measurement of TBE and CB-PTSD and may be affected by small sample sizes and potential confounding factors.

Finally, none of the included studies assessed the cost-effectiveness of the interventions proposed in this guideline. As a result, the economic implications of implementing these strategies remain unclear.

These limitations highlight the need for higher-quality prospective research, including standardized outcome measures and economic evaluations, to strengthen the evidence base in this field and provide more person-centred and context-specific recommendations.

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- Fleur Libovitz, expert with lived experience
- Hannelore De Muynck, expert with lived experience

## 14. Revision

The CG will be revised every 3-5 years unless new, high-grade evidence emerges sooner.

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## 16. Disclaimer

We have taken the utmost care to prepare and maintain this Clinical Guidance paper. Nevertheless, the VVOG accepts no liability for any inaccuracies, nor for damage, adverse effects or inconvenience of any kind (actions, omissions and decisions based on this information).



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## Appendix 1. Priority questions and outcomes

| Priority guideline question<br>P = Population; I = Intervention; C =<br>Comparator; O = Outcome                                                                        | Priority outcomes                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Antenatal</b>                                                                                                                                                       |                                                                                                         |
| 1.<br>For all pregnant patients (and their partners) in antenatal care (P), do interpersonal measures (I), compared with routine care (C), prevent TBE or CB-PTSD (O)? | Primary: Incidence of TBE/CB-PTSD<br>Secondary: Patient satisfaction                                    |
| 2.<br>For all pregnant patients (and their partners) in antenatal care (P), do structural measures (I), compared with routine care (C), prevent TBE or CB-PTSD (O)?    | Primary: Incidence of TBE/CB-PTSD<br>Secondary: Patient satisfaction                                    |
| <b>Intrapartum</b>                                                                                                                                                     |                                                                                                         |
| 3.<br>For all patients in labour (P), does recommended intrapartum anaesthesia (I), compared to on-demand anaesthesia (C), prevent TBE or CB-PTSD (O)?                 | Primary: Incidence of TBE/CB-PTSD<br>Secondary: Patient satisfaction                                    |
| 4.<br>For all patients undergoing an emergency caesarean section (P), does neuraxial anaesthesia (I), compared to general anaesthesia (C), prevent TBE or CB-PTSD (O)? | Primary: Incidence of TBE/CB-PTSD<br>Secondary: Patient satisfaction                                    |
| 5.<br>For all patients in labour (P), do interpersonal measures (I), compared with routine care (C), prevent TBE or CB-PTSD (O)?                                       | Primary: Incidence of TBE/CB-PTSD<br>Secondary: Patient satisfaction                                    |
| 6.<br>For all patients in labour (P), do structural measures (I), compared with routine care (C), prevent TBE or CB-PTSD (O)?                                          | Primary: Incidence of TBE/CB-PTSD<br>Secondary: Patient satisfaction                                    |
| <b>Postpartum</b>                                                                                                                                                      |                                                                                                         |
| 7.<br>For all postnatal patients (and their partners) (P), does routine screening for TBE (I), compared with no screening (C), prevent development of CB-PTSD (O)?     | Primary: Development of CB-PTSD<br>Secondary: Patient satisfaction<br>When to screen?<br>How to screen? |
| 8.<br>For all postnatal patients (and their partners) (P), do interpersonal measures (I),                                                                              | Primary: Development of CB-PTSD<br>Secondary: Patient satisfaction                                      |



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|                                                                                                                                                            |                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| compared with routine care (C), prevent development of CB-PTSD (O)?                                                                                        |                                                                    |
| 9.<br>For all postnatal patients (and their partners) (P), do structural measures (I), compared with routine care (C), prevent development of CB-PTSD (O)? | Primary: Development of CB-PTSD<br>Secondary: Patient satisfaction |



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## Appendix 2. Inclusion and exclusion criteria

| Inclusion criteria                           | Exclusion criteria                                               |
|----------------------------------------------|------------------------------------------------------------------|
| Publication year, from 01-01-2017 onwards    | Publication year prior to 01-01-2017                             |
| Full text available                          | No full text available                                           |
| TBE or CB-PTSD: interventions for prevention | CB-PTSD: specific therapeutic interventions                      |
| Article in English or Dutch                  | Article in a different language than English or Dutch            |
|                                              | Target population                                                |
|                                              | Study outcomes                                                   |
|                                              | Methods or study design                                          |
|                                              | Articles only covering prevalence and/or risk factors as a topic |

### Appendix 3. Overview of literature search and PRISMA statement

#### PubMed:

("Post-Traumatic Stress Disorders"[Mesh] OR PTSD[tiab] OR "posttraumatic stress"[tiab] OR "psychological trauma"[tiab] OR "birth trauma"[tiab] ) AND ( "Parturition"[Mesh] OR "Delivery, Obstetric"[Mesh] OR childbirth[tiab] OR birth[tiab] ) AND ( "Prevention and Control"[Mesh] OR "Therapy"[Mesh] OR prevent\*[tiab] OR treatment[tiab] OR intervention\*[tiab] ) NOT ( "Pelvic Floor Disorders"[Mesh] OR "Perineal Trauma"[Mesh] OR "Anal Canal"[Mesh] OR OASI[tiab] OR "obstetric anal sphincter"[tiab] OR perineal[tiab] OR pelvic[tiab] )

#### Filters:

- 01/01/2017 - now (search 20/12/2025)
- Full text available
- Article type: Case Reports, Clinical Study, Clinical Trial, Comparative Study, Controlled Clinical Trial, Evaluation Study, Guideline, Meta-Analysis, Multicenter Study, Network Meta-Analysis, Observational Study, Practice Guideline, Pragmatic Clinical Trial, Randomised Controlled Trial, Review, Scoping Review, Systematic Review
- Language: English, Dutch

#### Embase:

('posttraumatic stress disorder'/exp OR ptsd:ti,ab OR 'posttraumatic stress':ti,ab OR 'psychological trauma':ti,ab OR 'birth trauma':ti,ab) AND ('childbirth'/exp OR 'labor'/exp OR childbirth:ti,ab OR birth:ti,ab) AND ('disease prevention'/exp OR 'therapy'/exp OR prevent\*:ti,ab OR treatment:ti,ab OR intervention\*:ti,ab) NOT ('pelvic floor disorder'/exp OR 'perineal injury'/exp OR 'anal canal'/exp OR oasi:ti,ab OR 'obstetric anal sphincter':ti,ab OR perineal:ti,ab OR pelvic:ti,ab)

Filters: #1 AND (2017:py OR 2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py OR 2024:py OR 2025:py OR 2026:py) AND ('article'/it OR 'article in press'/it OR 'clinical trial'/it OR 'review'/it)

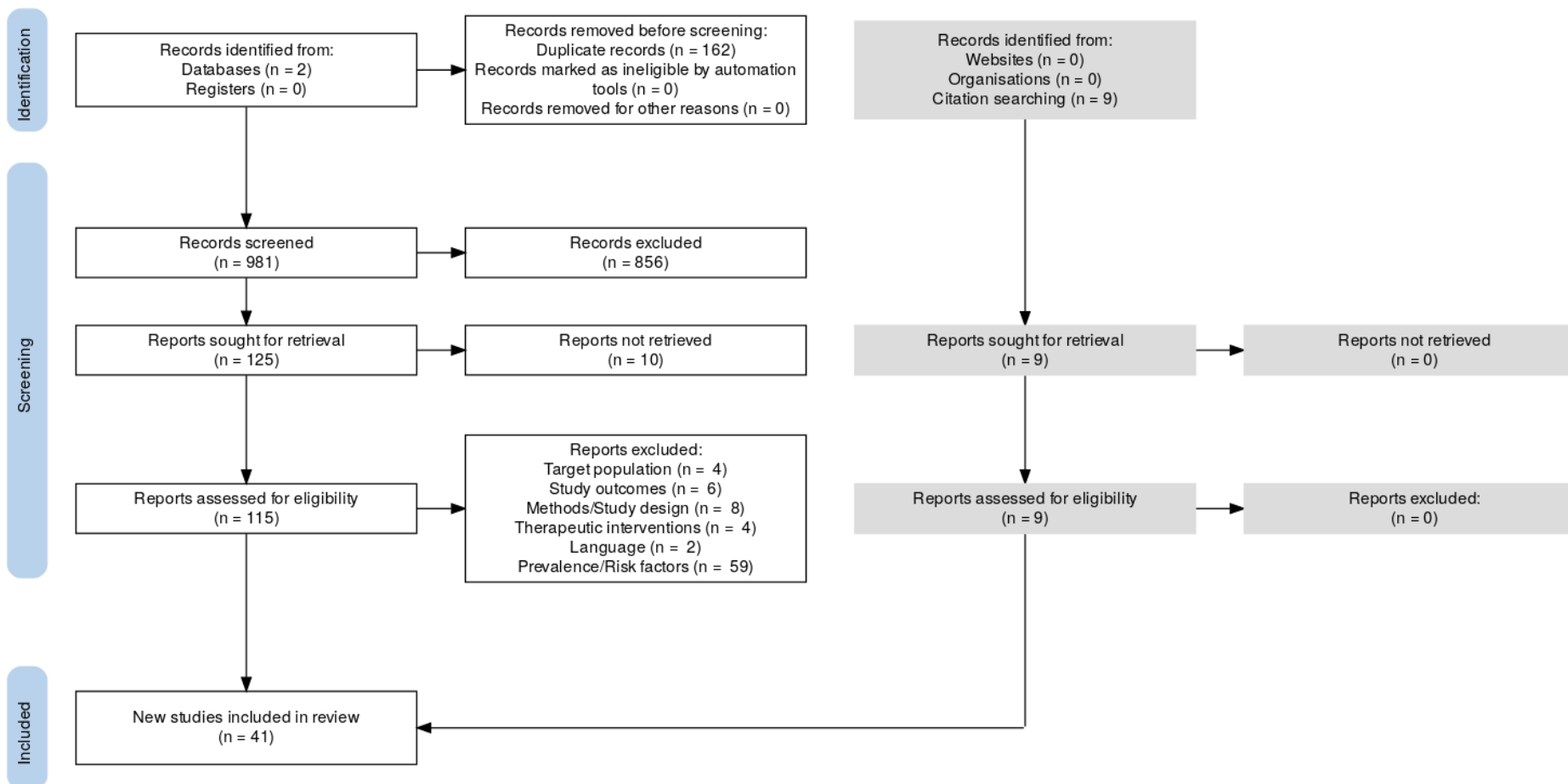


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Identification of new studies via databases and registers

Identification of new studies via other methods





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## Appendix 4. Overview of included articles per article type and topic

| Article type                              | Amount of papers |
|-------------------------------------------|------------------|
| Primary Research Studies                  |                  |
| Quantitative studies                      |                  |
| - RCT                                     | 2                |
| - Not-randomised controlled trial         | 1                |
| - Cohort study                            | 4                |
| - Cross-sectional study                   | 3                |
| - Longitudinal study                      | 1                |
| Qualitative studies                       | 1                |
| Evidence Syntheses                        |                  |
| Systematic review and meta-analysis       | 5                |
| Systematic review                         | 5                |
| Scoping review                            | 2                |
| Narrative review                          | 10               |
| Clinical and practice guidance            |                  |
| Clinical practice guidelines              | 4                |
| Expert recommendation                     | 6                |
| Theoretical and conceptual papers         |                  |
| Concept analysis                          | 1                |
| Topic                                     | Amount of papers |
| Birth trauma definition/conceptualisation | 9                |
| Prevalence/risk factors                   | 15               |
| Interpersonal interventions               | 21               |
| Structural interventions                  | 18               |