

Dear colleagues,

A003

We kindly ask you to participate in this 5-minute survey on tocolysis in order to evaluate clinical practice in Swiss hospitals and private practices. Your responses will be collected anonymously and cannot be traced back to you, your clinic, or your practice.

Thank you very much for your valuable support.

Prof. Dr. med. N. Ochsenbein-Kölble, Prof. Dr. phil A.P. Simões-Wüst, Dr. med. univ. M. Kiebler

I agree to participate.

A001

Are you currently primarily employed in a hospital or a private practice?

A002

Private Practice

Hospital

2 Active Filter(s)

Filter A002/F1

If any of the following options is selected: **1**

Then jump to page **BP** after the next button was clicked

Filter A002/F2

If any of the following options is selected: **2**

Then jump to page **BS** after the next button was clicked

Is your practice a certified SIWF training center?

BP01 

Yes

No

What is your role in the practice?

BP02 

Specialist

Resident Physician

How many years of clinical experience do you have in obstetrics?

BP03 

Under 5 years

5-10 years

11-20 years

21-30 years

Over 30 years

In which region is your practice located?

BP04 

Lake Geneva Region (VD, VS, GE)

Espace Mittelland (BE, FR, SO, NE, JU)

Zurich (ZH)

Eastern Switzerland (GL, SH, AR, AI, SG, GR, TG)

Northwestern Switzerland (BS, BL, AG)

Central Switzerland (LU, UR, SZ, OW, NW, ZG)

Ticino (TI)

Not specified

BP05 

Which specialization title(s) do you hold?

Operative Gynecology and Obstetrics

Gynecological oncology

Fetomaternal medicine

Gynecological endocrinology / reproductive medicine

Urogynecology

Senology

None

Do you also work in an obstetrics department in addition to your work in the practice?

BP06 

Yes

No

2 Active Filter(s)

Filter BP06/F1

If any of the following options is selected: **1**

Then jump to page **CB** after the next button was clicked

Filter BP06/F2

If any of the following options is selected: **2**

Then jump to page **CP** after the next button was clicked

Which clinical parameter(s) are most important to you for the indication of tocolysis?

CP01

Cervical length below 25 mm (TVUS)

Positive biochemical test (PartoSure[®], FullTerm[®])

> 4 contractions in 20 minutes or 6 contractions in 60 minutes

History of PTB / late miscarriage

PPROM < 34 weeks of gestation with contractions

PPROM < 34 weeks of gestation without contractions

Bleeding with placenta previa

Other

1 Active Filter(s)**Filter CP01/F1**

If any of the following options is selected: **3**

Then display question/text **CP02** placed later in the questionnaire (otherwise hide)

What primary objectives do you pursue with tocolysis?

CP03

Transfer to a perinatal center

Gaining time for lung maturation induction

Prolongation of fetal development in utero

Meeting the patient's needs

Other

CP04

What are general contraindications for tocolysis for you?

Sepsis

Severe preeclampsia

Maternal hemodynamic instability

Pulmonary edema

Pathological CTG

Placental abruption

Chorioamnionitis

Gestational age below 22 0/7 weeks

Gestational age over 34 0/7 weeks within an uncomplicated pregnancy

None

Other

Do you differentiate between painful and non-painful contractions regarding your decision for indication of tocolysis?

CP02 

No

Yes, I assign a higher risk of PTB to painful contractions compared to non-painful contractions

Yes, I assign a higher risk of PTB to non-painful contractions compared to painful contractions

When do you usually stop a tocolytic therapy?

DP01 

After successful lung maturation induction and/or from 34 0/7 weeks of gestation

From 35 0/7 weeks of gestation

From 36 0/7 weeks of gestation

Beyond 37 0/7 weeks of gestation

Which medication(s) do you generally use for tocolytic therapy?

EP01 

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

Do you recommend bed rest during tocolysis?

GP01 

Yes

No

GP02 

If tocolysis is indicated, I most closely follow:

Internal SOPs / Guidelines

S2k-Guideline "Prevention & Treatment of Preterm Birth"

SGGG Expert Letter No. 41 "Tocolysis for Preterm Labor"

My own professional experience

Expertise of experienced colleagues

International Guidelines (ACOG, RCOG, NICE, Up-To-Date, etc.)

Other

1 Active Filter(s)

Filter GP02/F1

If any of the following options is selected: **1, 2, 3, 4, 5, 6, -9**

Then jump to page **jump1** after the next button was clicked

In which SIWF category is your department categorized?

BS01

SIWF Category A

SIWF Category B

No Category

How many births occur at your hospital annually?

BS02

< 500 births

501–1000 births

1001–2000 births

2001–3000 births

> 3000 births

What level of neonatal care is provided at your hospital?

BS03

CANU I: $\geq 35+0$ weeks, ≥ 2000 g; no ventilation, no monitoring, no CPAP

CANU IIA: $\geq 34+0$ weeks, ≥ 1500 g; continuous monitoring; CPAP optional

CANU IIB: $\geq 32+0$ weeks, ≥ 1250 g; continuous monitoring; CPAP available

CANU III: All viable gestational ages; full intensive care (ventilation, CPAP, central catheter)

No neonatal unit

CANU I (Basic Neonatal Care)

CANU IIA (Neonatal Special Care Unit)

CANU IIB (Neonatal Intermediate Care Unit)

CANU III (Neonatal Intensive Care Unit)

What is your clinical role at the hospital?

BS05

Chief physician / Deputy chief physician

Head of Department

Senior physician

Resident Physician

BS06

How many years of clinical experience do you have in obstetrics?

Under 5 years


5-10 years

11-20 years

21-30 years

Over 30 years

In which region is your hospital located?

BS07 

Lake Geneva Region (VD, VS, GE)

Espace Mittelland (BE, FR, SO, NE, JU)

Zurich (ZH)

Eastern Switzerland (GL, SH, AR, AI, SG, GR, TG)

Central Switzerland (LU, UR, SZ, OW, NW, ZG)

Northwestern Switzerland (BS, BL, AG)

Ticino (TI)

Not specified

Which specialization title(s) do you hold?

BS08 

Operative Gynecology and Obstetrics

Gynecological oncology

Urogynecology

Fetomaternal medicine

Senology

Gynecological endocrinology / reproductive medicine

None

Which clinical parameter(s) are most important to you for the indication of tocolysis?

CS01 

Cervical length below 25 mm (TVUS)

Positive biochemical test (PartoSure[®], FullTerm[®])

> 4 contractions in 20 minutes or 6 contractions in 60 minutes

History of PTB / late miscarriage

PPROM < 34 weeks of gestation with contractions

PPROM < 34 weeks of gestation without contractions

Bleeding with placenta previa

Other

1 Active Filter(s)

Filter CS01/F1

If any of the following options is selected: 3

Then display question/text CS02 placed later in the questionnaire (otherwise hide)

What primary objectives do you pursue with tocolysis?

CS03 

Transfer to a perinatal center

Gaining time for lung maturation induction

Prolongation of fetal development in utero

Meeting the patient's needs

Other

CS04 

What are general contraindications for tocolysis for you?

Sepsis

Severe preeclampsia

Maternal hemodynamic instability

Pulmonary edema

Pathological CTG

Placental abruption

Chorioamnionitis

Gestational age below 22 0/7 weeks

Gestational age over 34 0/7 weeks within an uncomplicated pregnancy

None

Other

CS02 

Do you differentiate between painful and non-painful contractions regarding your decision for indication of tocolysis?

No

Yes, I assign a higher risk of PTB to painful contractions compared to non-painful contractions

Yes, I assign a higher risk of PTB to non-painful contractions compared to painful contractions

DS01 

When do you usually stop a tocolytic therapy?

After successful lung maturation induction and/or from 34 0/7 weeks of gestation

From 35 0/7 weeks of gestation

From 36 0/7 weeks of gestation

Beyond 37 0/7 weeks of gestation

DS02 

At what gestational age do you start lung maturation induction at the earliest?

From + gestational weeks

DS03 

Up to which gestational age do you perform lung maturation induction?

To + gestational weeks

DS04 

Do you administer a repeat course of lung maturation induction ("rescue-dose") in the event of renewed threatened PTB?

Yes

No

ES01 

Which medication(s) do you generally use for tocolytic therapy?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

ES02 

Which medication do you use as the first-choice tocolytic in case of acute threatened PTB in the context of an uncomplicated singleton pregnancy?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

ES03 

Do you choose the type of tocolytic based on whether it is an uncomplicated singleton pregnancy, or high-risk pregnancy (e.g. multiples/extreme PTB, IUGR or placenta previa)? (Single Choice Question)

Yes

No

1 Active Filter(s)

Filter ES03/F1

If any of the following options is selected: **1**

Then display question/text **ES04** placed later in the questionnaire (otherwise hide)

ES04 

Which medication do you use as the first-choice tocolytic in case of acute threatened PTB in the context of a high-risk pregnancy (multiples, extreme PTB, IUGR, bleeding due to placenta previa)?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

ES05 

What is the most important criterion for you when choosing a tocolytic?

Existing Approval by Swissmedic

Efficacy

Few Maternal Side Effects

Few Fetal Side Effects

Practical Applicability

Medication Costs

Guideline Recommendations

Other

ES06 

Which side effects have you observed with which tocolytics?

(If you have not documented any side effects in any of the drug classes, please leave the check mark in front of the drug class empty.)

Beta-sympathomimetic (Hexoprenaline, e.g. Gynipral®)

Cardiac arrhythmias (incl. tachycardia)

Hypokalaemia

Pulmonary oedema

Other

Calcium channel blocker (Nifedipine, e.g. Adalat®)

Hypotension and/or tachycardia

Pulmonary oedema

Other

Non-steroidal anti-inflammatory drug (Indomethacin, e.g. Indocid®)

Premature closure of ductus arteriosus botalli

Other

Nitrates (Nitroglycerin, e.g. Nitroderm TTS®)

Headache

Severe hypotension/tachycardia

Other

Oxytocin receptor antagonist (Atosiban, e.g. Tractocile®)

Nausea/vomiting

Hypotension and/or tachycardia

Other

Magnesium oral

Flush/sweating

Nausea/vomiting

Hypotension/tachycardia

Other

Magnesium i.v.

Flush/sweating

Nausea/vomiting

Hypotension/tachycardia

Other

Bryophyllum pinnatum

Headache

Palpitations

Tremor

Other

What measures/information do you use to monitor the efficacy of tocolytics?

ES07 

Cervical Length Measurement

Tocogram/CTG

Subjective Perception

Vaginal Examination

Other

Do you perform maintenance tocolysis?

FS01 

(Maintenance tocolysis = tocolysis > 48 hours)

Yes

No

1 Active Filter(s)

Filter FS01/F1

If any of the following options is selected: **2**

Then jump to page **GS** after the next button was clicked

FS02 

For which reason(s) do you perform maintenance tocolysis?

At patient's request

For specific indications (e.g., bleeding with placenta previa, amniotic sac prolapse, multiple pregnancies)

In early weeks of gestation (before 28 weeks)

Other reasons

FS03 

If you perform maintenance tocolysis, which tocolysis sequence do you normally use?

The same as initially started

Switch to a different tocolytic

FS04 

When performing maintenance tocolysis, which tocolytic do you usually use?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

Do you use tocolysis during the procedure of cervical cerclage?

GS01 

Yes

No

Do you perform tocolysis in patients with PPROM < 34 weeks of gestation & without uterine activity, and if so, for how long?

GS02 

Yes

No

Do you recommend bed rest during tocolysis?

GS03 

Yes

No

If tocolysis is not effective (tocolysis failure):

GS04 

I stop tocolysis

I continue tocolysis until delivery

I continue the initial tocolysis and additionally administer a second tocolytic

I stop the initial tocolysis and administer a different tocolytic

What recommendation(s) do you provide at discharge regarding the procedure for patients who required tocolysis?

GS05 

Bed rest

Restricted activity

Progesterone (oral/vaginal) if cervix < 25mm

Close monitoring by private practice physician

Close monitoring by hospital

100% sick leave

None

If tocolysis is indicated, I most closely follow:

GS06 

Internal SOPs / Guidelines

S2k-Guideline “Prevention & Treatment of Preterm Birth”

SGGG Expert Letter No. 41 “Tocolysis for Preterm Labor”

My own professional experience

Expertise of experienced colleagues

International Guidelines (ACOG, RCOG, NICE, Up-To-Date, etc.)

Other

1 Active Filter(s)

Filter GS06/F1

If any of the following options is selected: **1, 2, 3, 4, 5, 6, -9**

Then jump to page **jump1** after the next button was clicked

BP09 

How many births per year are you actively involved in?

1-24

25-50

51-100

101-200

>200

CB01 

Which clinical parameter(s) are most important to you for the indication of tocolysis?

Cervical length below 25 mm (TVUS)

Positive biochemical test (PartoSure[®], FullTerm[®])

> 4 contractions in 20 minutes or 6 contractions in 60 minutes

History of PTB / late miscarriage

PPROM < 34 weeks of gestation with contractions

PPROM < 34 weeks of gestation without contractions

Bleeding with placenta previa

Other

1 Active Filter(s)**Filter CB01/F1**

If any of the following options is selected: 3

Then display question/text **CB05** placed later in the questionnaire (otherwise hide)CB03 

What primary objectives do you pursue with tocolysis?

Transfer to a perinatal center

Gaining time for lung maturation induction

Prolongation of fetal development in utero

Meeting the patient's needs

Other

CB04 

What are general contraindications for tocolysis for you?

Sepsis

Severe preeclampsia

Maternal hemodynamic instability

Pulmonary edema

Pathological CTG

Placental abruption

Chorioamnionitis

Gestational age below 22 0/7 weeks

Gestational age over 34 0/7 weeks within an uncomplicated pregnancy

None

Other

Do you differentiate between painful and non-painful contractions regarding your decision for indication of tocolysis?

CB05 

No

Yes, I assign a higher risk of PTB to painful contractions compared to non-painful contractions

Yes, I assign a higher risk of PTB to non-painful contractions compared to painful contractions

When do you usually stop a tocolytic therapy?

DB01 

After successful lung maturation induction and/or from 34 0/7 weeks of gestation

From 35 0/7 weeks of gestation

From 36 0/7 weeks of gestation

Beyond 37 0/7 weeks of gestation

At what gestational age do you start lung maturation induction at the earliest?

DB02 

From + gestational weeks

Up to which gestational age do you perform lung maturation induction?

DB03 

To + gestational weeks

Do you administer a repeat course of lung maturation induction ("rescue-dose") in the event of renewed threatened PTB?

DB04 

Yes

No

EB01 

Which medication(s) do you generally use for tocolytic therapy?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

EB02 

Which medication do you use as the first-choice tocolytic in case of acute threatened PTB in the context of an uncomplicated singleton pregnancy?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

EB03 

Do you choose the type of tocolytic based on whether it is an uncomplicated singleton pregnancy, or high-risk pregnancy (e.g. multiples/extreme PTB, IUGR or placenta previa)? (Single Choice Question)

Yes

No

1 Active Filter(s)

Filter EB03/F1

If any of the following options is selected: **1**

Then display question/text **EB04** placed later in the questionnaire (otherwise hide)

EB04 

Which medication do you use as the first-choice tocolytic in case of acute threatened PTB in the context of a high-risk pregnancy (multiples, extreme PTB, IUGR, bleeding due to placenta previa)?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

EB05 

What is the most important criterion for you when choosing a tocolytic?

Existing Approval by Swissmedic

Efficacy

Few Maternal Side Effects

Few Fetal Side Effects

Practical Applicability

Medication Costs

Guideline Recommendations

Other

EB06 

Which side effects have you observed with which tocolytics?

(If you have not documented any side effects in any of the drug classes, please leave the check mark in front of the drug class empty.)

Beta-sympathomimetic (Hexoprenaline, e.g. Gynipral®)

Cardiac arrhythmias (incl. tachycardia)

Hypokalaemia

Pulmonary oedema

Other

Calcium channel blocker (Nifedipine, e.g. Adalat®)

Hypotension and/or tachycardia

Pulmonary oedema

Other

Non-steroidal anti-inflammatory drug (Indomethacin, e.g. Indocid®)

Premature closure of ductus arteriosus botalli

Other

Nitrates (Nitroglycerin, e.g. Nitroderm TTS®)

Headache

Severe hypotension/tachycardia

Other

Oxytocin receptor antagonist (Atosiban, e.g. Tractocile®)

Nausea/vomiting

Hypotension and/or tachycardia

Other

Magnesium oral

Flush/sweating

Nausea/vomiting

Hypotension/tachycardia

Other

Magnesium i.v.

Flush/sweating

Nausea/vomiting

Hypotension/tachycardia

Other

Bryophyllum pinnatum

Headache

Palpitations

Tremor

Other

What measures/information do you use to monitor the efficacy of tocolytics?

EB07 

Cervical Length Measurement

Tocogram/CTG

Subjective Perception

Vaginal Examination

Other

Do you perform maintenance tocolysis?

FB01 

(Maintenance tocolysis = tocolysis > 48 hours)

Yes

No

1 Active Filter(s)

Filter FB01/F1

If any of the following options is selected: **2**

Then jump to page **GB** after the next button was clicked

FB04 

For which reason(s) do you perform maintenance tocolysis?

At patient's request

For specific indications (e.g., bleeding with placenta previa, amniotic sac prolapse, multiple pregnancies)

In early weeks of gestation (before 28 weeks)

Other reasons

FB02 

If you perform maintenance tocolysis, which tocolysis sequence do you normally use?

The same as initially started

Switch to a different tocolytic

FB03 

When performing maintenance tocolysis, which tocolytic do you usually use?

Beta-sympathomimetic (Hexoprenaline, e.g., Gynipral®)

Calcium channel blocker (Nifedipine, e.g., Adalat®)

Non-steroidal antiphlogistic (Indometacin, e.g., Indocid®)

Nitrates (Nitroglycerin, e.g., Nitroderm TTS®)

Oxytocin receptor antagonist (Atosiban, e.g., Tractocile®)

Magnesium (parenteral)

Magnesium (oral)

Bryophyllum

Other

Do you use tocolysis during the procedure of cervical cerclage?

GB01 

Yes

No

Do you perform tocolysis in patients with PPROM < 34 weeks of gestation & without uterine activity, and if so, for how long?

GB02 

Yes

No

Do you recommend bed rest during tocolysis?

GB03 

Yes

No

If tocolysis is not effective (tocolysis failure):

GB04 

I stop tocolysis

I continue tocolysis until delivery

I continue the initial tocolysis and additionally administer a second tocolytic

I stop the initial tocolysis and administer a different tocolytic

What recommendation(s) do you provide at discharge regarding the procedure for patients who required tocolysis?

GB05 

Bed rest

Restricted activity

Progesterone (oral/vaginal) if cervix < 25mm

Close monitoring by private practice physician

Close monitoring by hospital

100% sick leave

None

If tocolysis is indicated, I most closely follow:

GB06 

Internal SOPs / Guidelines

S2k-Guideline "Prevention & Treatment of Preterm Birth"

SGGG Expert Letter No. 41 "Tocolysis for Preterm Labor"

My own professional experience

Expertise of experienced colleagues

International Guidelines (ACOG, RCOG, NICE, Up-To-Date, etc.)

Other

1 Active Filter(s)

Filter GB06/F1

If any of the following options is selected: **1, 2, 3, 4, 5, 6, -9**

Then jump to page **jump1** after the next button was clicked

Page 19

jump1

PHP code

```
option('nextbutton', 'Senden/Envoyer/Inviare');
```

Last Page

Thank you very much for your valuable participation!

We would like to sincerely thank you for your support.

If you have any comments or questions regarding the survey, please do not hesitate to contact us at
martin.kiebler@usz.ch.

We greatly appreciate your feedback and thank you once again for your participation!

Your data has been saved. You may now close the browser window.

Dr. med. univ. Martin Kiebler, Prof. Dr. phil. II Ana Paula Simões-Wüst,
Prof. Dr. med. Nicole Ochsenbein-Kölble, Universitätsspital Zürich,
Forschung Geburtshilfe