

# Emergency Communication

## How to generate texts for patients/persons in need

Prof. Dr.med. Dr.rer.nat.  
**Ernil Hansen**  
 Dept. Anesthesiology  
 University Medical Center Regensburg  
 Germany

[emil.hansen@ukr.de](mailto:emil.hansen@ukr.de)



## The "Kansas-Experiment"

M.E. Wright  
 Emergency Hospital Kansas

ambulance attendants (paramedics): 3 groups instructed, others not  
 1977, for 6 months

Instruction:

- 1) Remove patients from crowd noise.
- 2) Recite calm the „Statement“ (patient conscious or not)
- 3) No negative or unrelated conversation.

Results:

- more patients reached the hospital alive
- more patients survived
- quicker recovery rates
- shorter hospital stay

In: Jacobs. Communication for first responders. Brady 1991



## The "Kansas-Experiment"

The „Statement“:

„The worst is over. We are taking you to the hospital. Everything is being made ready. Let your body concentrate on repairing itself and feeling **secure**. Let your heart, your blood vessels, everything, bring themselves into a state of **preserving your life**. Bleed just enough so as to cleanse the wound, and let the blood vessels close down so that your **life is preserved**. Your body weight, your body heat, everything, is being **maintained**. Things are being made ready at the hospital for you. We're getting there as quickly and **safely** as possible. You are now in a safe position. The worst is over.“

positive suggestions



## Emergencies

How we react to an incident is as important as the incident itself.

Our body cannot distinguish between events that are threatening in reality and those that appear threatening to us.



## Emergency Trance

- 1) A patient in an emergency is in an extreme situation.
  - Emergency:
  - external impact
  - unprepared
  - inevitable
  - abrupt loss of control
  - helplessness
- 2) In extreme situations (fear, stress, pain)
  - physical impairment
  - existential threat

⇒ natural trance
- 3) Trance is an altered state of consciousness (≠ rational thinking) that demands/allows a special communication



## Trance-Phenomena

- focussed attention, self referred
- images vs. Rational, abstract conception
- literal, concrete understanding
- authorities, loss of critical judgement
- catalepsy
- dissociation
- altered perception, sensory and time distortion
- selective amnesia
- negative hallucinations
- strong somatic and mental reactions
- high suggestibility




**Case I**

• **A child falls, her hand is bleeding**      Mother:

A) "Oh, my God, oh my God! What are we gonna do? She's gonna need stitches. Oh my poor baby! How could this happen? Haven't I told you ...! I knew it. Bob, come, hurry up! Something terrible happened. Just do something! I'm sure, we have to give her stitches. Isn't there anything else we can do? Hold her down!"


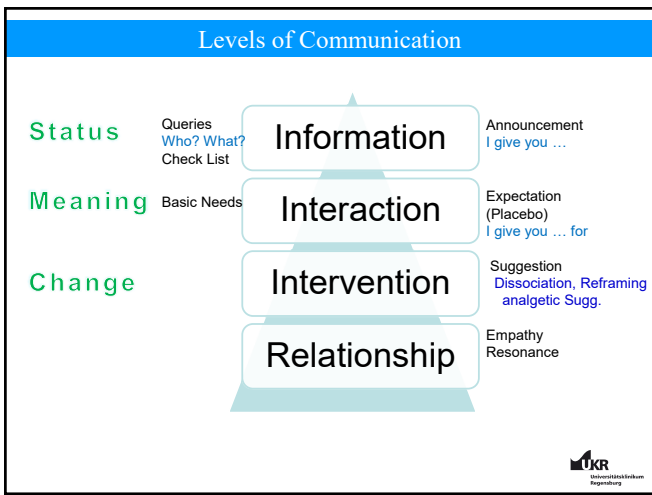
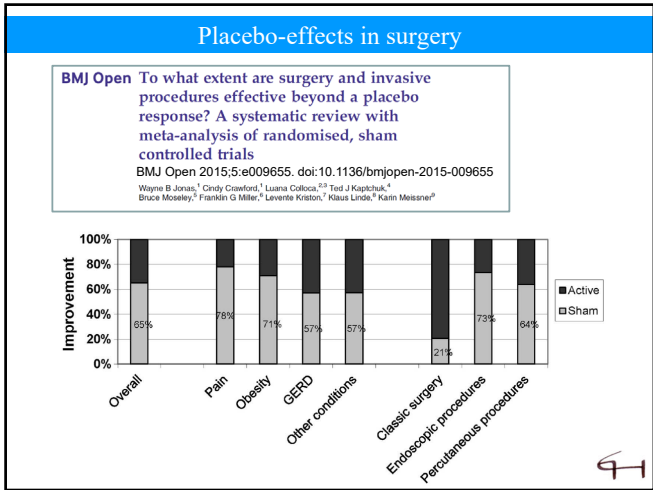
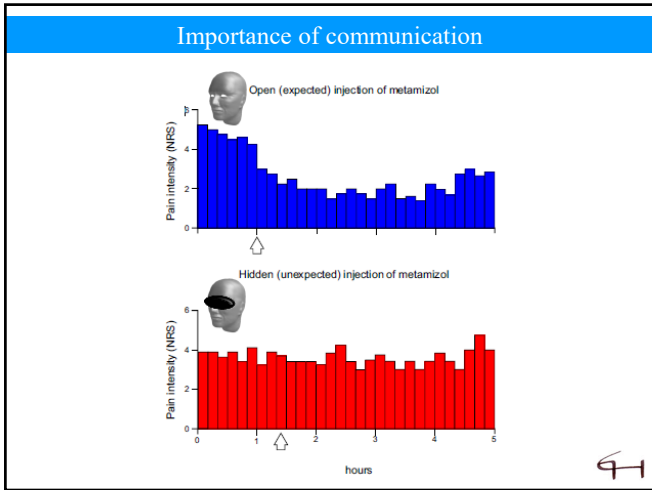
Acosta J and Prager JS: The worst is over – what to say when every moment counts. Jodere Group, San Diego 2002



**Case I**


rapport      reframing      pacing honesty  
 affirmation      bring to activity      positive suggestions

B) Lily, Mommy's here – and I'm going to take good care of you. Well, it looks like you cut yourself. I'll bet that really hurts. And look at all that blood. Look at that good, red, strong, healthy blood. I'll bet that has bled just enough now to clean out the wound. You can go ahead and stop that bleeding now while I get you a bandage. OK. And you can help me by holding the end of the bandage. Good job!

**Exercise**

1. Pick a medical situation
2. Announce every intervention
3. Add meaning



Text Generation		
Basic Psychological Needs	Traumatic Stressors	Topics for "Essential Communication"
Relationship and belonging	Abandonment Inability to express oneself	Accompaniment Contact
Pleasure gain and Avoidance of displeasure	Pain, suffering Hopelessness	Comfort Confidence
Orientation and control	Chaos Dependence Helplessness	Information Control Instructions
Self-esteem and self-protection (Physical integrity)	Degradation Fear, threat Injury	Respect Safety Healing

# Exercise

address:

Accompaniment
Contact
Comfort
Confidence
Information
Control
Instructions
Respect
Safety
Healing

## Intraoperative Suggestions

thebmj | BMJ 2020;371:m4284 | doi: 10.1136/bmj.m4284

**ORIGINAL RESEARCH**  
Multicentre randomised controlled trial

### Effect of therapeutic suggestions during general anaesthesia on postoperative pain and opioid use

Hartmuth Nowak,<sup>1</sup> Nina Zech,<sup>2</sup> Sven Assmusen,<sup>1</sup> and colleagues

BMJ Impact Factor = 107

5 centres, 385 patients, 18-70y  
1-3 h surgeries  
defined, controlled depth of anaesthesia  
ear-phones after intubation until extubation  
20 min text, 10 min break, repeated  
defined pain therapy: PCA, NRS>3,  
periodic evaluation

thebmj | BMJ 2020;371:m4547 | doi: 10.1136/bmj.m4547

**EDITORIALS**  
Can we soothe the subconscious during general anaesthesia?  
Carefully chosen words and music might reduce postoperative pain  
Daniel Mossac,<sup>1</sup> Sylvain Boet<sup>1-3</sup>

## Intraoperative Suggestions

Part A (19 min, followed by a 10 min break, repeated several times. Start after induction of anaesthesia and ends with stop of volatile anaesthetic):

You are sleeping sound and deep.  
And you can relax and rest, **recover** and draw strength, because you are **safe** now, **well-protected**.  
Everything that you hear and see and feel contributes to your **best care**.  
And that's why you can completely concentrate on your body's own way **to heal itself**.

And we are right **by your side**.  
My voice will go with you, and you can focus on it, because what I say to you is important for you, is important for your **well-being** and your **healing**.

With every deep breath that the respirator **takes care** of, so that you can save your strength for later,  
You can take in fresh air, oxygen, and whatever else is good for you and is of **help to you**.  
And with every exhale you can **get rid** of all the used air and can let go all that is disturbing or a burden to you.  
Breathe out and let go.  
And with every breath you take you can take in ease, **confidence** and strength for **healing**, on and on.

## Intraoperative Suggestions

The surgery is going well. Surgeon and anaesthetist are very satisfied. Everything is going according to plan, very professional, organized, and smooth.  
They sure know their trait. They know how to optimize your **care**.  
Your surgeons are very experienced in this type of surgery.  
They are highly focused and work with thorough **care**.  
Everything is ready and set for an **optimal treatment**.  
Those are the best conditions for a **safe** and **successful surgery**.

The anaesthetist and the nurse are responsible for nothing else but your **comfort** and your **safety**.  
They are not departing **from your side**, until you have successfully and **safely** weathered this challenge.  
They are trained and experienced to look after you and take **good care** of you.  
You are well **sheltered**.  
All medication and equipment are ready to serve you well, to do the right and necessary things in all situations.  
We can always provide something **good for you**.  
All your essential bodily functions are continuously monitored and assessed.

This consisting beeping sounds of the monitor shows your smooth, rhythmic heartbeat.  
Your blood pressure is strong and steady.  
The most essential tasks **you are performing yourself**.  
We healthcare guides just pay attention and **care** so that you and your body find optimal conditions.

## Intraoperative Suggestions

As your mind is resting your body can concentrate fully on **self-healing** and **self-protection**.  
All of your organs, your heart and your blood vessels, are **working together** to ensure **wellbeing**, **safety** and **healing**.

*(indirect suggestion using another speaker):*  
Perfect! Your patient looks like he is really doing well.  
So calm and **stable**. He is doing a good job.  
So, this surely will result in quick and full **healing**.  
And he will soon be on his feet again, and can enjoy a **successful surgery**.  
Are you satisfied?  
Completely! This has been going perfectly.  
Great!

Listen to what I am saying! You already know that this **surgery is good for you** and will continue to **help you**.  
And while your treatment here proceeds steady and thoroughly well, everything is getting prepared for your optimal further **care** in the recovery room and at the nurse's station.

## Intraoperative Suggestions

While your treatment is progressing perfectly you can retreat to an inner **safe** and **comfortable** place, and you can recover and **regain strength**. Your body knows that when your mind is calm and relaxed and **confident** your unconscious mind can best **take care** for you. There, all of the involuntary functions of your body are stored. Your digestion, your fluid balance, your temperature regulation, your hormone release, your program for wound healing, your infection defence, the rhythm of your sleep, and everything that keeps you resilient and healthy. And from right there, all of these functions are **regulated and coordinated**. Your **inner self** takes perfect **care** of you.

Let's now talk about the time after, after the surgery has been completed successfully. Should you feel some pressure beneath the bandage, know that that's quite normal, and it just **informs** you that the **healing** has already begun. It's actually your white blood cells that have hurried to this place to do everything they can for the wound to **heal**. They are summoning other cells, are sending out messengers, and are regulating blood circulation to make sure that more nutrients, more oxygen, and more energy arrive there. The signals your body sends from there translate into: Please don't touch too much, please leave it be for a while and let **healing** take place! And then they need not to be so loud any longer and can become more and more quiet, because everything has already been done to **support your healing**. And everything is well taken **care** of.



## Intraoperative Suggestions

You will notice that any tension or anxiety would only enhance pain. Therefore, it might be better for you to relax, especially the part of the body that has undergone surgery. Just let go. It is quite normal to notice the area where surgery took place, and to feel sensations in the area where your body is working hard to **repair** and put everything **in order** again. It's alright that all these signals and messages now become even fainter and softer and quieter. As soon as you have noticed them your attention can move to other things. Like dropping your car off in a repair shop and then going shopping or going for a walk. It is good to know that **your body** and your cells exactly know what to do, and how to **do it best**. Your attention is not even needed. You can turn your attention to something even more pleasant and joyful.

While your body and your caregivers **take good care** of everything, you can recall the image of a **comfortable** and **safe** place, while looking forward and being curious to what you might experience there, and from time to time, maybe hear and feel from afar, that someone is working diligently on your **recovery**.

And what else will be happening after your operation was completed beautifully? Step by step all of **your body function** will start again: Your blood pressure starts in full swing and your **digestion**. You are producing saliva and you can swallow, and you can drink. Everything returns in the right **direction**, always top down, from the mouth to the stomach, and in the intestines and on and on, uniformly in one direction, straight ahead.



## Intraoperative Suggestions

And **comfort** can expand more and more, all over. And you may ask yourself what you will want to eat first. You can then send your blood circulation downwards to your intestines who have rested in the meantime. And with all the supply of energy and oxygen they gather pace again. You can swallow fluids again, and notice the fluids flowing down the oesophagus into the stomach and the stomach transports them further into the intestines and in the intestines moving on, further and further, consistently and continually in one direction, on and on.

And what else will be happening after your surgery is completed? Oh yes, there were fears and worries. They were present for you to be careful and cautious, and to **protect** you. Now they are needless and without value, because everything is being done already for your **wellbeing**, for your **safety**, and for your **healing**. Your recovery is already happening, all by itself, unstoppable.

**Your body** is really good at this! You already know how to do it. And we are **by your side**, and **accompany** you. You are **safe** now.



## Intraoperative Suggestions

And one more thing for you to know, when the surgery is completed: Since we **supported** your respiration for a long time you can now take over **your own breathing** again. Then, it is time to sigh and you can breathe deeply and strongly, can clear your airways and cough, cough away all the mucus. You will notice your **strength** returning.

We are all **confident**, and you too can be **confident**, that you will be just fine after the surgery, that the medication to relief nausea and pain are very effective, and that you will be **comfortable**. You will feel carefree and unaffected hours and days after the surgery. You will feel calm, warm, relaxed and content.

Whatever you experience will not disturb your **wellbeing**, rather lets you know that your body is working eagerly to **repair**, to put in place, to bring back into **balance**, and to normalize all functions. Your **healing** can continue, growing steadily. On and on. Perfect!



### ORIGINAL RESEARCH

Multicentre randomised controlled trial

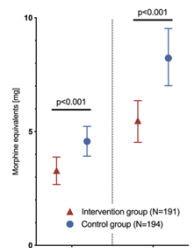
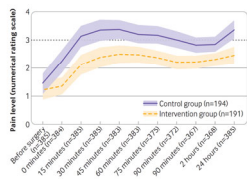
## Intraoperative Suggestions

# Effect of therapeutic suggestions during general anaesthesia on postoperative pain and opioid use

Hartmuth Nowak,<sup>1</sup> Nina Zech,<sup>1</sup> Sven Asmusen,<sup>1</sup> Tim Rahmel,<sup>1</sup> Michael Tryba,<sup>1,4</sup> Gunther Opren,<sup>1</sup> Lisa Grasse,<sup>1</sup> Kathi Schork,<sup>2</sup> Manaja Mosler,<sup>3</sup> Johannes Lorenz,<sup>4</sup> Katharina Geymann,<sup>5</sup> Corina Metter,<sup>6</sup> Thomas Sailer,<sup>6</sup> Alexandra Ziegler,<sup>6</sup> Kerin Lutz,<sup>7</sup> Michael Adamik,<sup>8</sup> Emil Hansen<sup>9</sup>

thebmj | BMJ 2020;371:m4284 | doi: 10.1136/bmj.m4284

5 Zentren, 385 patients, 18-70a  
1-3 h surgery  
defined, controlled depth of anaesthesia  
ear-phones after Intubation til prior to extub.  
20min text with background music,  
10min break, repeated  
Defined pain therapy:  
PCA, NRS>3, regular query



To avoid any postoperative analgesics:  
NNT = 6.0



### frontiers | Frontiers in Psychology

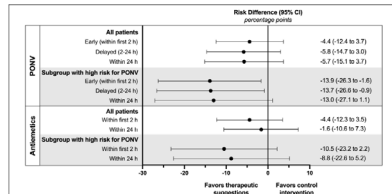
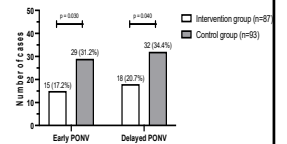
ORIGINAL RESEARCH  
published: 11 July 2022  
doi: 10.3389/fpsyg.2022.888888

## PONV

# Therapeutic Suggestions During General Anesthesia Reduce Postoperative Nausea and Vomiting in High-Risk Patients – A Post hoc Analysis of a Randomized Controlled Trial

Hartmuth Nowak<sup>1\*</sup>, Alexander Wipf<sup>1</sup>, Tim Rahmel<sup>1</sup>, Gunther Opren<sup>1</sup>, Lisa Grasse<sup>1</sup>, Manaja Mosler<sup>1</sup>, Katharina Geymann<sup>1</sup>, Corina Metter<sup>1</sup>, Alexandra Ziegler<sup>1</sup>, Kerin Lutz<sup>2</sup>, Johannes Lorenz<sup>3</sup>, Thomas Sailer<sup>4</sup>, Michael Tryba<sup>1,4</sup>, Michael Adamik<sup>5</sup>, Emil Hansen<sup>6</sup> and Nina Zech<sup>1</sup>

\*Correspondence: Hartmuth Nowak  
Department of Anesthesiology, Intensive Care Medicine and Pain Therapy, University Hospital Regensburg, Regensburg, Germany  
Department of Anesthesiology, Intensive Care Medicine, University Hospital Regensburg, Regensburg, Germany  
Department of Anesthesiology and Intensive Care Medicine, University Hospital, University of Cologne, Cologne, Germany  
Department of Anesthesiology, University Hospital, Ludwig-Maximilians-University, Munich, Germany  
Department of Anesthesiology, University Hospital Regensburg, University of Regensburg, Regensburg, Germany  
Clinic for Anesthesiology, Intensive Care Medicine, Emergency Medicine and Pain Therapy, Hospital Hildesheim, Hildesheim, Germany



To avoid PONV  
NNT = 7.1/7.3

FIGURE 3 | Absolute risk differences of PONV incidence and postoperative use of analgesics for all patients and subgroup of patients with a high risk for PONV (defined by an Abbreviated PR-8).



### Comparison awake/anesthesia and old/new

#### Effect Size

	Periop Kekecs 2014	Hyp live	Hyp tape	Sugg live	Sugg tape	Intraop Rosendahl 2016	Intraop Nowak 2020
Anxiety	0.62	0.60	0.70	0.23	0.14	0.03	
Pain	0.35	0.50	0.00	0.18	0.09	0.04	<b>0.45</b>
Analgesics	0.23	-0.12	0.70	-0.15	0.16	0.16	<b>0.36</b>
Nausea	0.60	0.89	0.42	0.25	0.07	0.21	<b>0.34*</b>
Antiemetics						0.22	<b>0.30*</b>

\* with PONV prophylaxis

Link to audio file:

<https://www.frontiersin.org/articles/10.3389/fpsyg.2022.898326/full#supplementary-material>



### Methods of Hypnotherapy Applicable

- indirect, permissive, open suggestions
- utilisation
- dissociation (place, time, body part)
- reframing
- specific suggestions (cold = analgesia, vasoconstriction)
- pacing and leading
- double bind
- metaphors
- posthypnotic suggestion
- nonverbal communication



### Specific Suggestions

To a patient with second degree burns:

“Now, while we are preparing for the transport to the hospital, I want you to close your eyes and imagine that – while I place some sterile gauze on your body – I am really packing the entire area in soft, clean snow. Remember what it is like to put your arm into a wall of very soft, very fresh, fallen snow? Notice how cool and comfortable each area is becoming as you see the snow being applied. Good.“



### Indirect Suggestions

- I know a guy, who ...
- Most patients do not believe me when I say:  
(after a break and then looking directly into the eyes)  
“You can do it !”

For selective amnesia:

“It’s such a common experience to forget the bad dreams in the morning.“



### Dissociation

**Car accident, a man heavily traumatized, fractured leg**

A) Tim, come here. This looks terrible. You better do not move before you end up paraplegic! Everything’s fine. Just relax! I’ll give you something so you don’t feel anything anymore. This doesn’t hurt. What have you done that this could happen?

B) I’m Dr. ..., we are here to help you. The worst is over. The ambulance is on the way. I can see that your leg needs attention. Why don’t you just scan the rest of your body for me now to see that everything else is all right. How’s your other leg? How do your arms feel? I’m sure there’s some other place you’d rather be right now. Where is that? The beach? Okay, while your body is tending to the healing, you can allow your mind to go to your favorite beach, and you can begin to feel comfortable being in that place – right now.



### Reframing in Children

Parents watch their children playing and running.  
A little girl falls down and bruises her knee.

Her Mother: “Oh no, now she will start screaming like hell !“

A man turns to the kid and says: „Let me see. What’s the colour of your blood ?“

The girl with tears in her eyes: “Red!“

„Red is good, this is the colour of strong, healthy blood. So this can heal fast.“

The girl comes running to her mother and proudly presents her bleeding knee.



## Double bind

- “Is it more comfortable for you with your arm on the side or on your body ?“
- “I wonder, if the bleeding will stop in 2, 3 or 4 minutes.“
- “Let’s find out how much relief this procedure will give you.“
- “I don’t know which way this feels better ...“



## Giving back Control

"Susan, that unpleasant feeling that you experience is the way of your body to tell you there's something wrong. But that signal doesn't have to be so loud any more. When the fireman has arrived you can stop shouting "Fire!". While you tell us how we can help you best, you might start controlling the scale of the signal. Just imagine colored electric cables – like your nervous system - running from the hurting areas to a light bulb in the brain. And every cable has got a separate switch and a dimmer to regulate. Now start turning down the light. Go ahead !“



## Reactions



Dear Professor Hansen,  
in December, I heard the BBC's Health Check podcast about your work playing calming words to patients under anaesthesia. I'm a British novelist, though translated into German among other languages, and the podcast made its way into the book I was writing at the time. ...  
The book is set in the English Peak District during the strict lockdown, and a recently-widowed older woman, entirely isolated because of recent cancer treatment, listens to the podcast and thinks about the scientific confirmation that bodies work better when we feel not only safe but accompanied by others. ...

Best wishes,  
Sarah Moss



that, and she remembers a podcast she listened to yesterday about a German professor of medicine who'd tried playing people reassuring words while they were under general anaesthetic to see what would happen. They needed fewer opioids afterwards, that was what happened, turns out you can measure **the painkilling properties of kindness**, of the human voice, and when she heard the professor translating his recording she nearly cried. *You are sleeping sound and deep, he said, you can relax and rest, because you are safe now, and well-protected. We are right by your side, and my voice will go with you.* Oh God, she thought, **don't we all need that, surgery or not,** don't we all need someone to murmur to us as we fall asleep that he is watching over us and so we are safe, though surely **you need a real person not a recording,** surely there's a better use for all this new technology than pacifying ourselves with a simulacrum of the relationships we can no longer have, electric blankets and recorded words of reassurance, cloth monkeys, that's what it is, because no-one knows how to unlock the cage and we're all forgetting how to go back to the group. **What if the surgeon himself said those words** while operating, what if it were a true litany in the visceral real life of the operating theatre rather than wires in the patient's ears as well as on her chest and wrists and legs? Sleeping with that voice must be what it's like to believe in God, to be able to imagine – not imagine, to know – that this fucked up world in which maddened baby monkeys are among the least signs of human inhumanity is **still somehow secure in the hands of an omnipotent and benevolent father.**  
Though I walk in the valley of the shadow of death, still thou art with me. All shall be well and all manner of thing. Nice idea. If only.

