Acta Anaesth. Bel., 2025, 76 (3): *199-207*

Review

Upward feedback in anesthesiology training: from theory to practice

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Abstract

Upward feedback, in which trainees provide structured evaluations of their supervisors, is increasingly recognized as a valuable element of medical education. It supports a culture of continuous learning, open communication, and mutual accountability. By offering trainees a structured and safe platform to evaluate their supervisors, upward feedback can enhance teaching quality, strengthen professional relationships, and support the overall learning environment.

Digital platforms such as Medbook facilitate this process by enabling efficient feedback collection, safeguarding confidentiality, and presenting results in a user-friendly format. Despite these strengths, implementation challenges remain. Trainees may be hesitant to give candid feedback due to hierarchical dynamics, while supervisors may struggle with critical input because of time constraints or perceived threats to their credibility. To be effective, upward feedback must be framed as constructive and growth-oriented rather than punitive. This requires ongoing institutional support, clear guidance, and dedicated time for reflection and follow-up. When thoughtfully implemented, upward feedback can lead to measurable improvements in supervision and education, ultimately benefiting patient care.

Key words: **Upward feedback, Supervision, Resident evaluation, Faculty rating, Medical education.**

Introduction

In medical education, feedback is typically one-directional, with supervisors assessing the knowledge, skills, and performance of trainees. However, upward feedback - where trainees provide feedback to their supervisors - is gaining traction. Originating in business management, this approach challenges the conventional top-down model and promotes a more reciprocal approach. This shift encourages supervisors to be accountable to those they mentor, fostering a more dynamic and responsive learning environment.

Effective supervision extends beyond teaching clinical knowledge; it involves fostering critical thinking, supporting professional growth, and creating a positive learning climate[1]. Upward feedback provides valuable insights into supervisor's teaching, leadership, and interpersonal skills, often revealing areas for improvement that traditional evaluations overlook[2]. By integrating this feedback, supervisors can refine their teaching methods and strengthen mentorship relationships - benefiting both themselves and their trainees.

Several countries have successfully implemented educator feedback systems, leading to better training environments and outcomes[3-7]. However, in Belgium, such systems remain rare and are not systematically applied. To address this gap, this review aims to raise awareness among anesthesiologists about upward feedback, examine existing systems in medical specialist training, identify its benefits and challenges, and propose a conceptual framework for its practical implementation in anesthesiology training.

Why upward feedback matters

A key advantage of upward feedback is its potential to enhance supervisor performance and support professional development. Constructive feedback from trainees helps supervisors identify areas for growth in essential skills such as communication, teaching, and leadership[2]. The process fosters a

reflective mindset in supervisors, encouraging them to assess themselves and how their actions are perceived. This self-awareness enables targeted improvements that benefit both trainees and the broader team.

Beyond individual growth, upward feedback helps create a more supportive and enriched learning environment. By promoting open communication and mutual respect, it fosters a culture in which trainees feel heard and valued. This, in turn, reduces hierarchical power dynamics, helping to minimize the intimidation factor often associated with traditional medical training. When trainees feel safe to ask questions, share concerns, and seek guidance without fear, they engage more fully in their learning process, ultimately enhancing their development[8]. This sense of psychological safety is also closely tied to overall well-being. Van Vendeloo et al. found that residents who perceive their relationship with their supervisors as mutually supportive and beneficial report fewer symptoms of burnout[9].

Finally, the impact of upward feedback extends beyond education to patient care. Studies show that better supervision enhances trainees' competence and confidence, ultimately enhancing the quality of patient care. Anesthesiology trainees who reported a greater incidence of drug errors and medical errors with negative consequences to patients also reported lower scores for faculty supervision[10].

Existing upward feedback systems: a short overview

Several validated questionnaires have been developed to assess teaching quality in clinical training. Among the most widely accepted tools are the Stanford Faculty Development Program (SFDP-26)[4], System of Evaluation of Teaching Qualities (SETQ)[5], Effective Clinical Teaching (EFFECT) questionnaire[6], and Maastricht Clinical Teaching Questionnaire (MCTQ)[7].

The SFDP-26 questionnaire, originally developed in the United States, has become a standard for evaluating faculty performance in medical education[4]. It consists of 26 items rated on a 5-point Likert scale, providing structured feedback on teaching effectiveness. Over time, adaptations have been made to align with the needs of various training programs and institutions worldwide, ensuring its continued relevance.

Developed in 2006 in the Netherlands, the SETQ was one of the first international tools designed to assess, monitor, and enhance training quality in anesthesiology[5]. It is now used at over 260 training sites in 60 hospitals across the Netherlands and it is integrated into the European Society of Anaesthesiology and Intensive Care (ESAIC) framework for quality education and training.

The EFFECT questionnaire6 and the MCTQ[7], both developed in the Netherlands, provide structured assessments through closed-ended and open-ended questions, allowing for detailed feedback on strengths and areas for improvement. These tools include follow-up feedback sessions between trainees and supervisors, guided by a facilitator.

In 2008, De Oliveira developed a nine-item instrument to assess faculty supervision as perceived by anesthesia residents. While he demonstrated that the instrument yields valid and reliable results, he also cautioned against the potential influence of the halo effect, which could introduce bias into the evaluations[11].

Beyond structured surveys, narrative feedback systems offer a more qualitative approach, enabling trainees to share detailed insights about their supervisors. While this method provides richer, more specific observations, analyzing free-text responses can be more time-intensive than quantitative surveys. However, narrative feedback is increasingly recognized as a key vehicle for developing feedback literacy, where the act of giving and receiving feedback becomes a process of meaning-making rather than a simple exchange of information[12,13]. This perspective emphasizes that feedback is not merely delivered but co-constructed - its interpretation shaped by relationships, context, and credibility.

In line with this view, some institutions have adopted group discussions or facilitated feedback sessions, where trainees collaboratively provide feedback to supervisors with the help of a facilitator. These sessions create space for dialogue, collective sense-making, and depersonalized yet specific feedback. They also help mitigate individual power asymmetries, aligning well with the relational and interpretive nature of narrative feedback.

With advances in technology, digital platforms and real-time feedback systems are increasingly being used to streamline the process. Apps such as MyTIPReport allow trainees to give immediate, anonymous feedback on specific interactions, while frameworks like CanMEDS in Canada or the Accreditation Council for Graduate Medical Education (ACGME) integrate real-time assessments of leadership and teaching competencies.

In summary, upward feedback systems in medical education employ diverse approaches, often embedded in global frameworks such as CanMEDS and ACGME milestones. While these

systems have the potential to enhance training quality, overcoming barriers for both trainees and supervisors, as well as ensuring the effective implementation of feedback, is crucial to their success.

Challenges in implementing upward feedback

Both trainees and supervisors encounter distinct barriers when it comes to providing and receiving feedback.

Barriers for trainees

For trainees, several factors make it challenging to offer objective, honest and constructive feedback to their supervisors[14].

One important barrier lies in the subjective nature of evaluations, which can be affected by various **cognitive biases**. Research has shown that these evaluations are particularly vulnerable to rater biases, with the halo effect being the most pervasive[11]. This bias occurs when a trainee's general impression of a supervisor influences ratings across multiple attributes, resulting in inflated correlations and reduced reliability of the feedback. Thorndike originally described this phenomenon as the tendency of raters to "think of the person in general as rather good or rather inferior", and to color the judgment of the separate qualities by this general feeling[15].

Since the halo effect often operates at an unconscious level, trainees may not be aware of how their overall perception skews their ratings. This unconscious bias can lead to reluctance or difficulty in providing nuanced, constructive feedback, especially when trainees feel personally or professionally attached to the supervisor. Moreover, variation in bias from one rater to another complicates efforts to correct or mitigate its impact.

While improving item clarity in evaluation tools can help reduce the occurrence of halo bias[11], the inherent challenge of evaluating supervisors objectively remains a significant barrier for trainees.

A major challenge is the **hierarchical structure** within healthcare settings, which creates power dynamics that discourage trainees from voicing their opinions. The perceived authority of supervisors can make trainees reluctant to challenge decisions or offer critical feedback, particularly regarding leadership or teaching methods. This imbalance often leads to feedback flowing mainly from supervisors to trainees, rather than encouraging a two-way dialogue.

Another key barrier is the **fear of retaliation**. Trainees may hesitate to provide candid feedback due to concerns that it could negatively impact their evaluations, career prospects, or relationships within the team. This fear often stems from the belief that even constructive criticism could lead to punitive consequences or hamper their professional advancement. As a result, trainees may withhold important insights or offer superficial feedback that fails to reflect the true dynamics of the work environment.

Anonymous evaluations are one potential solution to facilitate honest upward feedback, particularly for trainees who may fear reprisal. These evaluations allow individuals to provide feedback without the worry of negative consequences affecting their professional standing. However, while anonymity encourages openness, it can sometimes lead to comments that are more hurtful than helpful, or even overly harsh, because writers feels less accountable for their words[16]. Conversely, non-anonymous feedback may lead to inflated scores, as trainees might feel pressured to provide overly positive feedback to avoid jeopardizing their own evaluations or relationships[17]. This reduces the likelihood of receiving the critical, constructive feedback necessary for real improvement. Consequently, the challenge lies in finding a balance between anonymity and accountability in feedback systems to ensure that feedback is both honest and useful for everyone involved.

Lastly, many **trainees lack training in providing constructive feedback**. Offering useful feedback requires skills such as clear communication, professionalism, and respect. Without proper training, trainees may struggle with the right approach, tone, or language, making them hesitant to provide meaningful feedback. Medical education programs, such as CanMEDS and ACGME, include training on providing feedback as part of residents' learning. However, these competencies are often not fully addressed in earlier stages of training, leaving many trainees without the necessary tools to give effective feedback.

Barriers for supervisors

Supervisors also face challenges when receiving and acting upon feedback from trainees.

One common barrier is **resistance to feedback**, especially when it is critical of a supervisor's teaching style or leadership practices. This resistance often stems from a fear of being perceived as ineffective or incompetent. Supervisors may also worry that accepting criticism could undermine their authority or credibility. However, it is important to recognize that negative feedback does not equate to being an incompetent anesthetist

- this distinction is often misunderstood, leading to unnecessary self-doubt or defensiveness.

Another obstacle is the **perceived validity of feedback**. Supervisors may doubt the reliability of evaluations from trainees, particularly if they feel these individuals lack the experience to assess their teaching or leadership effectively.

Further complicating this issue, studies indicate that faculty evaluations are not always an accurate reflection of teaching effectiveness. In some cases, educators who challenge students or provide constructive criticism receive lower ratings[18]. At the same time, instructors who are highly rated by trainees do not necessarily achieve better learning outcomes[19]. These discrepancies raise important questions about how feedback should be interpreted and applied to truly foster meaningful improvement.

Time constraints are another significant challenge. Many healthcare professionals, particularly senior physicians, often juggle heavy workloads and a wide range of responsibilities. With limited time, they may feel they cannot afford to engage in feedback processes, whether receiving or acting on it. The constant demands of administrative duties, patient care, and other obligations push them to prioritize immediate needs over long-term professional development, making reflection and feedback discussions difficult to integrate into their routine. However, research by Dexter provides strong evidence that there is no positive correlation between the quantity of anesthesiologists' clinical work and the quality of their clinical supervision[20]. This finding highlights the importance of not solely using clinical hours (or equivalent days or units) as indicators of an anesthesiologist's value in the operating room but also evaluating the quality of their supervisory role.

A final challenge is making feedback actionable. Supervisors need **proper training** to effectively receive, interpret, and implement feedback in ways that lead to real improvement[21]. Without this, feedback may be received but not used to drive meaningful change.

Ethical considerations in upward feedback

Given the sensitive nature of upward feedback in educational contexts, robust ethical safeguards are essential.

Confidentiality must extend beyond technical anonymization thresholds: trainees need clear and credible assurances that their safety - both psychological and professional - will be protected throughout data collection, reporting, and any ensuing faculty development discussions. Studies show that without such assurances, trainees may self-censor, particularly when feedback could impact their future evaluations or professional relationships[22,23]. At the same time, the long-term goal of fostering an open feedback culture must be acknowledged. This requires careful balance: promoting honest dialogue while respecting the vulnerabilities inherent in hierarchical relationships.

Psychological safety is vital, not only for trainees, but also for supervisors receiving feedback[22]. If feedback is perceived as evaluative or punitive rather than developmental, it can lead to defensive reactions among supervisors or guarded, strategic responses from trainees.

Ensuring informed consent is another key ethical consideration. Participants should be fully aware of how their feedback will be used, who will have access to it, and how supervisors will be supported - rather than penalized - based on the feedback they receive. Transparent communication about the purpose, process, and consequences of feedback is critical to uphold trust.

Institutions bear a central responsibility in this. Ethical oversight - through formal mechanisms such as review boards or educational governance structures - is necessary to protect participants and reinforce the legitimacy of upward feedback as an educational tool. Beyond procedural safeguards like ethics approval and secure data handling, institutions must also foster a culture of trust, where feedback is genuinely viewed as a means of growth. This cultural stewardship involves clear policies, explicit norms, and consistent modelling of feedback as constructive dialogue rather than judgment[24].

Implementing upward feedback in our department: a practical approach

Phase 1: Establishing the Feedback System

To facilitate structured upward feedback within our department, we implemented the validated questionnaire developed by De Oliveira, which was specifically designed for use in anesthesiology education11. This tool assesses nine key domains of effective supervision, including feedback delivery, approachability, encouragement of patient-centered learning, professionalism, presence during critical phases, peri-anesthesia planning, attention to safety, interpersonal skills, and the promotion of professional autonomy. To refine our assessment, we added two additional questions: "The supervision meets my expectations" and "The supervisor is a positive role model".

The evaluation was carried out using a paper-based format. The survey is presented in Figure 1.

Each question was rated on a Likert scale from 0 to 10, with 0 representing the lowest and 10 the highest teaching performance. Trainees were invited to provide feedback on supervisors with whom they had worked closely, and received email reminders if evaluations had not yet been submitted. Given the direct supervision model in our department, residents had ample opportunity to provide informed and meaningful evaluations.

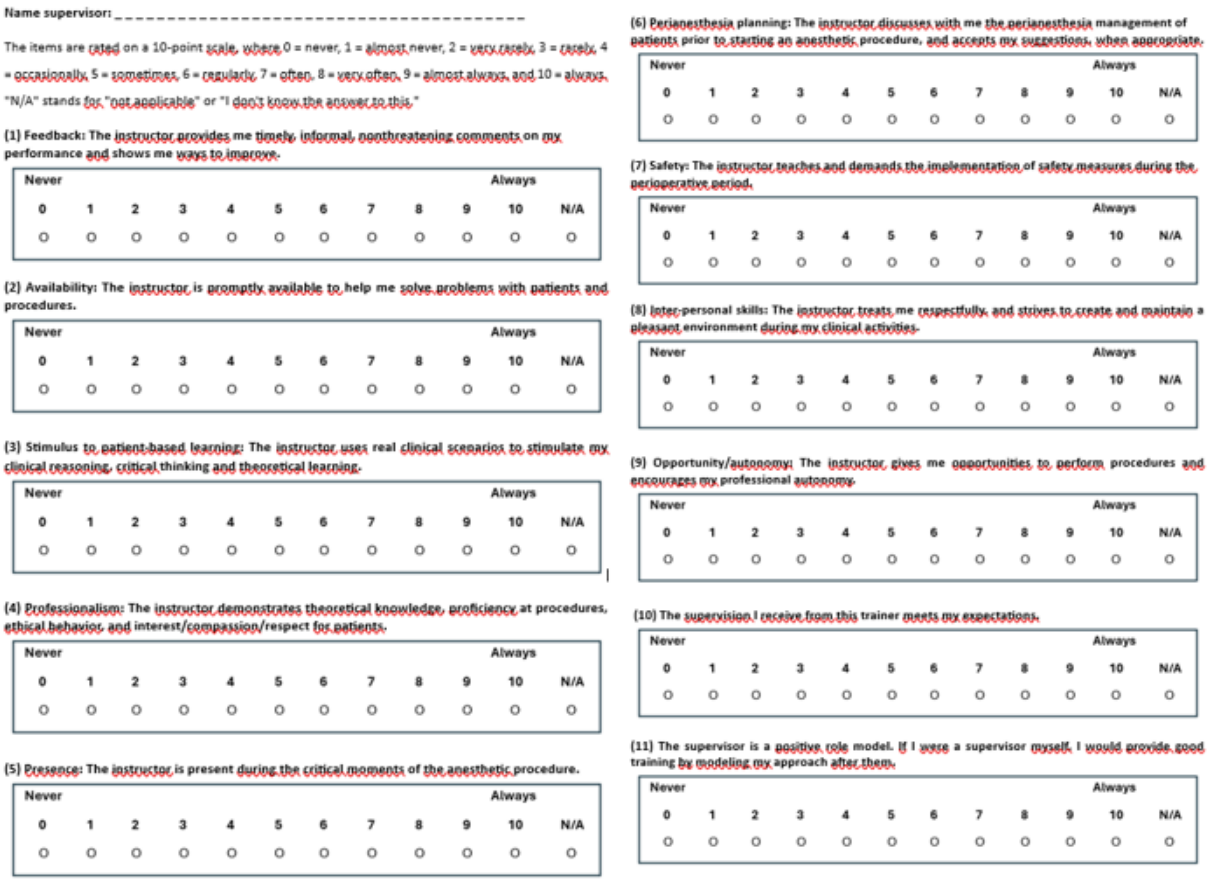
This implementation marked the beginning of a three-phase study designed to evaluate whether the perceived quality of supervision improves when supervisors are made aware of the evaluation process and receive structured feedback.

In phase 1, supervisors were not informed that evaluations were taking place. This allowed us to obtain an initial, unbiased baseline assessment of supervisory quality. After all data were gathered, supervisors were informed about the study and invited to provide informed consent for continued participation. Only data from supervisors who consented were retained for further analysis.

One month later, the same evaluation process was repeated. In this second phase, supervisors were aware that they were being evaluated, but had not yet received any feedback. Shortly after this round, participating supervisors received individualized reports consisting of 11 bar charts, one per evaluation item. Figure 2 illustrates the scores given for one of the 11 questions in the evaluation. The blue bars represent the scores of the supervisor's peers, while the highlighted yellow bar indicates the score of the supervisor. This visual comparison enables a straightforward interpretation of how the supervisor is perceived on a given item relative to their peers.

Phase 3 (currently ongoing) involves a third round of evaluations by trainees, after supervisors have had time to reflect on their feedback. This final phase aims to explore whether receiving concrete, structured feedback results in observable improvements in supervisory behavior over time.

To preserve the integrity of the study design and avoid bias, residents were not informed of the specific research question. Outcome data are being collected and will be analyzed in aggregate. Although data collection is still ongoing, preliminary experience indicates that the feedback process is both logistically feasible and well accepted. The findings will be addressed in a dedicated research article, which will report the full study outcomes, including changes across phases, participation rates, and both trainees' and supervisors' reflections on the feedback process. The present article focuses exclusively on the practical implementation of the upward feedback system.



Name supervisor: _____

The items are rated on a 10-point scale, where 0 = never, 1 = almost never, 2 = very rarely, 3 = rarely, 4 = occasionally, 5 = sometimes, 6 = regularly, 7 = often, 8 = very often, 9 = almost always, and 10 = always. "N/A" stands for "not applicable" or "I don't know the answer to this."

(1) Feedback: The instructor provides me timely, informal, nonthreatening comments on my performance and shows me ways to improve.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(2) Availability: The instructor is promptly available to help me solve problems with patients and procedures.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(3) Stimulus to patient-based learning: The instructor uses real clinical scenarios to stimulate my clinical reasoning, critical thinking and theoretical learning.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(4) Professionalism: The instructor demonstrates theoretical knowledge, proficiency at procedures, ethical behavior, and interest/compassion/respect for patients.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(5) Presence: The instructor is present during the critical moments of the anesthetic procedure.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(6) Perianesthesia planning: The instructor discusses with me the perianesthesia management of patients prior to starting an anesthetic procedure, and accepts my suggestions, when appropriate.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(7) Safety: The instructor teaches and demands the implementation of safety measures during the perioperative period.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(8) Inter-personal skills: The instructor treats me respectfully, and strives to create and maintain a pleasant environment during my clinical activities.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(9) Opportunity/autonomy: The instructor gives me opportunities to perform procedures and encourages my professional autonomy.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(10) The supervision I receive from this trainer meets my expectations.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

(11) The supervisor is a positive role model. If I were a supervisor myself, I would provide good training by modeling my approach after them.

Never — Always

0	1	2	3	4	5	6	7	8	9	10	N/A
o	o	o	o	o	o	o	o	o	o	o	o

Fig. 1 — Questionnaire adapted from De Oliveira[11].

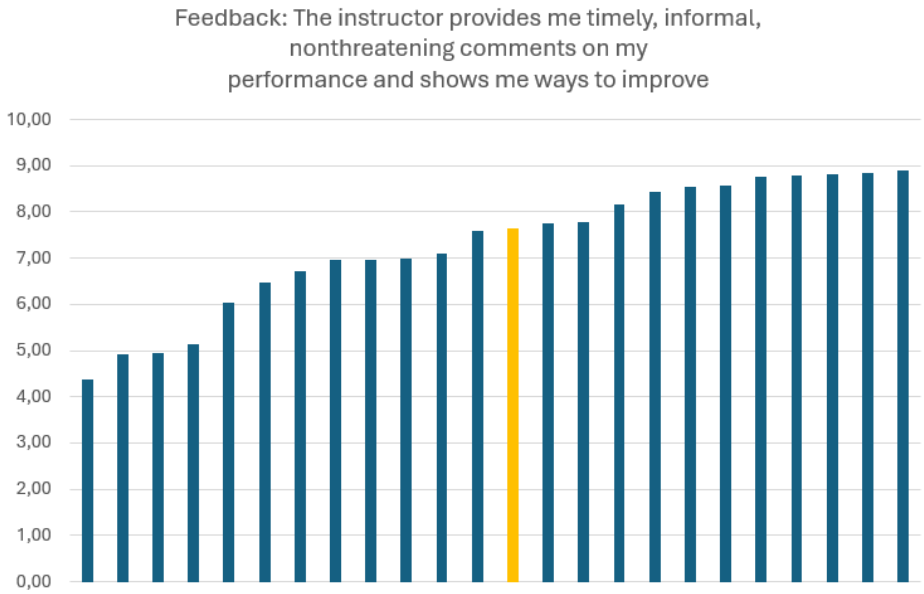


Fig. 2 — Bar charts illustrating the scores given for one of the 11 questions. The blue bars represent the scores of the supervisor's peers, yellow bar indicates the score of the supervisor.

Phase 2: Transitioning to a digital platform

In the next phase, we will integrate the feedback process into the Medbook platform. Through this system, supervisors will invite trainees with whom they have closely worked over the past months to provide feedback. To minimize potential selection bias - such as inviting only those expected to provide favorable evaluations - the head of the department may independently add additional trainees via Medbook.

To enhance the clarity of data visualization, we will transition from a ten-point to a four-point Likert scale (never, rarely, often, always). In addition to scoring each of the 11 questions, trainees will be encouraged to provide written feedback on their supervisor's strengths and areas for improvement.

Figure 3 is an example of how the anonymized 360° feedback will be visualized in Medbook. The system will automatically generate spider diagrams to provide a structured overview of evaluation scores across different competencies. In the diagram, the blue line represents the self-assessment, while the red line indicates the average score given by all respondents. This visual comparison helps to identify gaps between self-perception and external evaluations. Additionally, written comments from respondents are displayed, offering qualitative insights into strengths and areas for improvement. Please note that this figure is illustrative only and contains placeholder text from the test environment.

Both supervisors and the head of the department will have access to the anonymized results, including scores, written comments, and the number of respondents. To ensure confidentiality, results will only be displayed when at least five responses have been collected.

Phase 3: The feedback conversation

The core of the upward feedback process is the feedback conversation. In the third phase, we will introduce structured feedback meetings involving the supervisor, two trainee representatives speaking on behalf of their group, and an independent facilitator. These sessions are designed to foster dialogue, not just information transfer, reflecting a growing understanding in health professions education that effective feedback requires sense-making, mutual trust, and psychological safety[12,13].

The selection of trainee representatives will be coordinated by the training program to ensure objectivity and reduce potential bias. All trainees will receive training in giving feedback as part of the broader educational goals, and over time, all will have the opportunity to serve as representatives.

Prior to the meeting, the facilitator will hold a preparatory session with the trainee representatives to align their approach. During the conversation, the facilitator will outline the purpose and structure of the session, emphasizing that trainees are speaking as representatives of their group rather than expressing personal opinions. This ensures that feedback remains constructive and depersonalized.

Following the discussion, each supervisor will create a Personal Development Plan (PDP) based on the feedback received. This plan will outline key areas for improvement and strategies to address them. Supervisors will then discuss their PDP during performance review meetings with leadership, who will provide support where

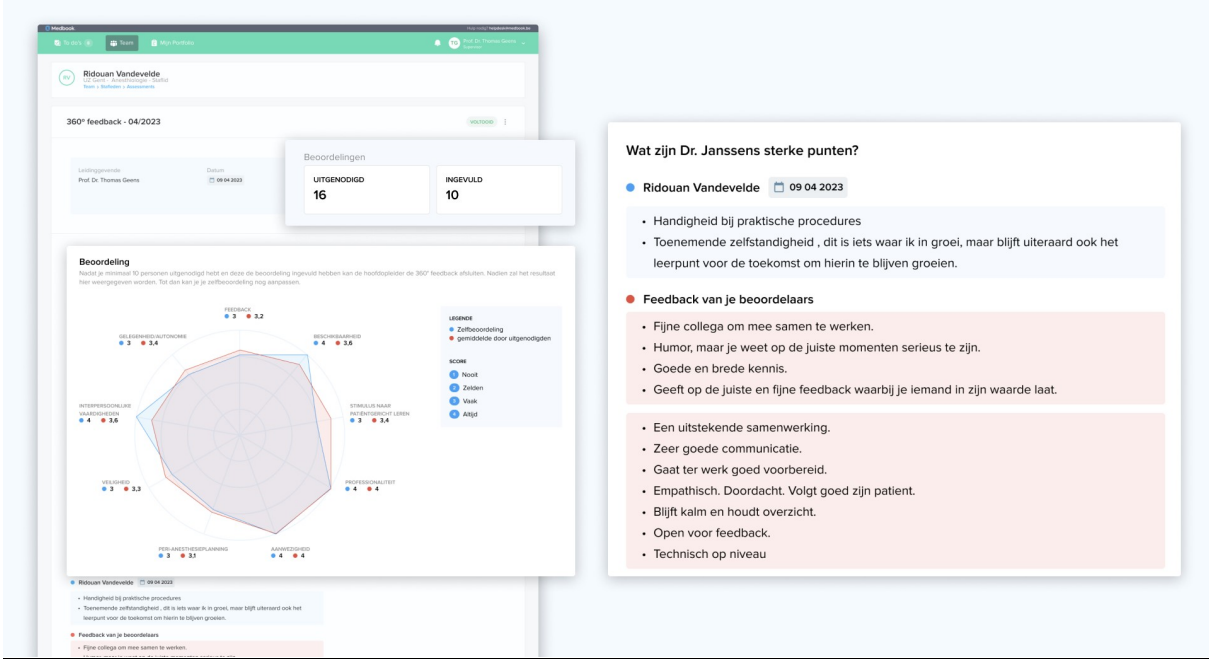


Fig. 3 — Example of the Medbook visualization format for 360° upward feedback. Reproduced with permission of Medbook. This screenshot is included for illustrative purposes only and does not represent actual study data. The labels and structure reflect how feedback will be presented to supervisors within the platform. Note: This version of the figure contains Dutch text, as it is a screenshot of a test environment within the platform. No actual feedback content is displayed.

necessary. Any recurrent negative feedback will also be addressed during these reviews, ensuring accountability and a sustained focus on professional growth.

Ensuring long-term impact

To ensure sustainable impact, we did not simply adopt the validated feedback tool by De Oliveira[11], but carefully adapted it to the specific context of Belgian postgraduate medical training. While the original instrument provided a solid foundation, several key modifications were necessary to enhance its relevance and effectiveness in our setting.

Firstly, the English-language instrument was translated into Dutch and slightly adapted for better alignment with the Belgian clinical training environment. Two additional items were added: "The supervision meets my expectations" and "The supervisor is a positive role model." These additions reflect institutional priorities and emphasize the importance of supervisors as professional role models - an aspect we consider essential for meaningful and lasting educational development.

A key innovation lies in embedding the instrument within Medbook, a widely used digital portfolio platform in Flemish postgraduate training by both trainees and supervisors. This integration enables automated feedback invitations, secure and anonymous data collection, and clear visual analytics, significantly improving long-term usability and integration into daily practice. Furthermore, the integration into Medbook reduces administrative burden – an essential consideration in today's resource-constrained educational environment.

Perhaps most critically, our approach addresses cultural dimensions that are often overlooked in the implementation of feedback systems. Within the traditionally hierarchical structure of Belgian clinical training, and given the reserved nature of Belgian culture - where individuals are generally less inclined to openly express their opinions - ensuring psychological safety was paramount. We deliberately maintained anonymity thresholds to encourage honest and constructive feedback. While our long-term goal is to foster a culture of more open and direct feedback, we recognize the need for a cautious and incremental approach that respects the current cultural climate.

However, fostering meaningful and lasting use of feedback requires more than a well-designed tool - it demands careful attention to the broader educational and cultural context in which the tool is embedded[25]. To address this, our implementation strategy will include several practical measures:

- Trainee preparation: All trainees will receive explicit training in how to formulate constructive, behaviorally anchored feedback. These sessions also address common cognitive biases in feedback and prepare them for group-based discussion formats.

- Supervisor support: Faculty development activities (e.g., coaching, workshops, departmental case discussions) are planned to help supervisors receive, interpret, and act on upward feedback. Emphasis will be placed on depersonalizing critical feedback and integrating it into professional development.
- Facilitated dialogue: Feedback will be discussed in structured sessions led by trained facilitators, allowing supervisors to explore the meaning of the feedback with guidance and without immediate pressure to defend themselves.
- Leadership involvement: Departmental and institutional leadership are engaged from the outset. They will monitor implementation fidelity and ensure that the feedback is framed and used as a tool for growth, not performance management.
- Cycle-based evaluation: Feedback cycles will occur annually, and visual reports will incorporate prior cycle data to track progress. This iterative approach reinforces accountability and models a growth mindset.

By embedding the feedback process within a broader strategy of cultural change, professional development, and institutional oversight, we aim to go beyond implementation and toward the normalization of upward feedback as part of postgraduate medical training.

Conclusion

Upward feedback offers a meaningful opportunity to strengthen medical education by encouraging a culture of openness and continuous improvement. When structured properly, it can improve teaching quality, foster trust, and promote shared responsibility for learning.

While digital tools like Medbook enhance the practical delivery of feedback - by supporting structured input, maintaining confidentiality, and visualizing results - successful implementation depends on more than just technology. Overcoming reluctance among trainees and defensiveness among supervisors requires framing the process as constructive and ensuring institutional support.
With appropriate training, clear communication, and follow-up, upward feedback can become a sustainable part of educational practice, improving not only the learning environment but also the quality of supervision and, by extension, patient care.

Source of funding: None.

Conflict of interest: None.

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