The SQF Model of Clinical Supervision

(Barnum, Guyer, Levy & Graham, 2009)

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Learning Objectives:

* Review The Conscious Competent Model
* Discuss Supervised Autonomy.
* Introduce the three components of the SQF Model of Clinical Supervision/Teaching
* Demonstrate how #1 and #2 come into play within the SQF Model
Learning Outcomes:

* Explain how the clinical situation influences the style of supervision needed

* Describe situational supervision and provide examples

* Describe learner development levels and provide examples

* Describe strategic questioning and provide examples

* Identify the five components of providing effective feedback

* Explain how Supervision, Questioning and Feedback forms the basis for a model of clinical supervision
Goal of Clinical Education

(Sexton et al. 2009)
Conscious Competency Model
(Howell & Fleischman, 1982)

- Unconsciously Incompetent
- Consciously Incompetent
- Consciously Competent
- Unconsciously Competent

Task specific
Not level specific
...however the reality is...

...that direct supervision of clinical experiences is vitally important in the development of all these characteristics in our students!

...and when done well, students actually develop more skill and a sense of confidence when appropriately supervised.

(Sexton et al. 2009)
Structured mentoring is necessary throughout the students’ professional education experiences in order for him or her to reach the higher stages of development needed for successful transition-to-practice.

(Sexton et al. 2009)
“Supervised Autonomy*”

Supervision/Mentoring/teaching

Independent but Guided application of CIP’s and Critical thinking skills

(Seaton et al. 2009)
The SQF Model of clinical teaching utilizes very specific Supervision, Questioning, and Feedback skills for the purpose of moving the student toward achieving clinical autonomy in both skill application and clinical reasoning.
Breaking Down SQF: Supervision

Supervision is based on the situation

The learner

The task

The Urgency and Consequences

(Levy et al, 2009)
The Learner in the SQF Model

D1
- Unconsciously Incompetent
- Consciously Incompetent

D2
- Consciously Competent

D3
- Unconsciously Competent
Take a minute to consider how a student at each of these levels might behave? What traits might they exhibit? What would you expect of them?

• Unconsciously Incompetent
• Consciously Incompetent

D1

• Consciously Competent

D2

• Unconsciously Competently

D3
Examine this video clip and attempt to identify the student’s development level.
Voting Slide: This student is at the:

- D1 level
- D2 level
- D3 level
Voting Slide:
This student is at the:

- D1 level
  - Unconsciously Incompetent
  - Consciously Competent
Breaking Down SQF: Supervision

- **the task** the learner is trying to complete,
- **the urgency** with which that task must be completed.
- **consequences** for the patient and student
Breaking Down SQF: Supervision

- **the task**: the learner is trying to complete,
- **the urgency**: with which that task must be completed.
- **Urgency**: During a competition
- **Consequences**: incorrectly diagnosing patient and allowing patient to return to participation with significant shoulder injury
Breaking Down SQF: Supervision

- We have described the SITUATION
  - Learner, Task, and environment (urgency & consequences)
- Now, let’s describe appropriate SUPERVISION
Breaking Down SQF: Supervision

Situational Supervision Style

Situational supervision requires the preceptor to use a supervisory style that matches the needs of the learner in each given situation. (Levy et al, 2009)

| S1     | • Providing Direction and Coaching  
|        | • Stay close: “standing beside” |
| S2     | • Being supportive and encouraging  
|        | • Create space: “over the shoulder” |
| S3     | • Delegating  
|        | • Create distance: “over there” |
Breaking Down SQF: Supervision

- Supervision Style 1 (S1)
  - Coach and Direct

- Supervision Style 2 (S2)
  - Support

- Supervision Style 3 (S3)
  - Delegate
Breaking Down SQF: Supervision

Supervision Style 1 (S1)
- “Keep the pressure on the cut for a little bit longer and then we’ll take a look to see what we need to do next”

Supervision Style 2 (S2)
- “You’re doing everything right! I’m right here if you have questions”

Supervision Style 3 (S3)
- “You got this. Let me check it when you are done”
Breaking Down SQF: Supervision

- Remember this video scene?
- What type of situational supervision style is the preceptor utilizing?
- What makes you think so?
Can you think of situation in which it would be appropriate to use each of these supervision styles within your practice setting?

- **S1**
  - Providing Direction and Coaching
  - Stay close: “standing beside”

- **S2**
  - Being supportive and encouraging
  - Create space: “over the shoulder”

- **S3**
  - Delegating
  - Create distance: “over there”
Breaking Down SQF: Questioning

- The type of *questioning pattern* you use should be *strategic.*

- **Strategic Questioning** is:
  - Consciously adapting the timing, sequencing, and phrasing of questions in order to facilitate student processing of information at increasingly complex cognition levels.

- The **purpose** of **Strategic Questioning** is to:
  - Actively engage and stimulate the student to use increasingly complex cognitive processing skills
  - Assist the student in developing a *model for thinking* to assist with making appropriate and accurate clinical decision.

(Barnum, 2008)
Breaking Down SQF: Questioning

**Questioning Level 1 (Q1)**

| Remembering | “what level” |

Questions that require the student to **recall facts** and **identify** foundational knowledge:

**Purpose** is to establish student’s knowledge base and confirm for the student and the preceptor that student has the basic knowledge needed to complete the task at hand.

(Barnum, 2008)
Breaking Down SQF: Questioning

Q1 Questioning Style 1 to use with D1 student

“What is primary goal right now?”
- To stop the bleeding
“Direct pressure”
“What is the best method to use to stop this patient from continuing to bleed?”
- Direct pressure
“Once you have slowed or stopped the bleeding, what is the next goal?”
- Determine type and severity of wound
  and decide if he will be able to continue wrestling”

GOAL for Q1 level for D1 student
- Reinforce a sequence
- Review basic concepts
- Apply basic skills
Breaking Down SQF: **Questioning**

**Questioning Level 2 (Q2)**

<table>
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<tr>
<th>Using</th>
<th>“So what level”</th>
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Questions that require the student to **compare**, **analyze**, **synthesize** and **apply** knowledge confirmed through L2 questions.

**Purpose:** to transition the student from using low to high level cognitive processing skills.

*Barnum, 2008*
Breaking Down SQF: Questioning

- Questioning Style 2(Q2) to use with D2 student
  - How do you want to handle closing the wound?
  - I notice the chin strap for his head gear is going to rub on the wound site. Which technique are you going to use to address this problem?
  - What are your concerns when the player begins wrestling again in the next match?
Comparison of questions by level

Q1
- What is primary goal right now?
- What is the best method .....  
- What is the next step?
- Identify your primary concerns
- What factors determine .....  

Q2
- How do you want to handle the situation?
- Which technique should you use based on this situation?
Breaking Down SQF: Questioning

**Questioning Level 3 (Q3)**

| Creating | “now what level” |

Questions require the student to **evaluate** information, **formulate** plans, **infer** meaning, and/or **defend** decisions.

**Purpose**: to provide opportunity for students to practice and utilize processing skills vital for developing clinical reasoning and critical thinking skills.
Q3 type questions

- Why did you choose to close the wound here instead of referring the patient to urgent care for sutures?
- What happens if the wound closures you applied come off or does not stop the bleeding?
- Why you allowed the patient to return to play.
Strategic Questioning for D1 Student

Ο Usually start with Q1 questions (what) that target memory. For D1 learners, you should ask mostly Q1 questions.
Ο Next, ask a few Q2 level questions (so what) that target application, synthesis and analysis.
Ο Finally, ask 1 or 2 Q3 questions (now what) that target evaluation, rationale, and ability to infer meaning.
Strategic Questioning for D2 Student

- **Start** with Q1 questions (what) that target memory.
- Next, ask mostly Q2 level questions (so what) that target application, synthesis and analysis.
- Finally, **ask 2 or 3** Q3 questions (now what) that target evaluation, rationale, and ability to infer meaning.
Strategic Questioning for D3 Student

- Ask Q1 questions if needed.
- Next, ask **a few** Q2 level questions.
- Finally, **mostly** Q3 questions (now what) that target evaluation, rationale, and ability to infer meaning.
- Q3 questions are the most difficult to answer and you do not need to ask a lot of them, just a few well worded and pointed questions.
Putting S and Q Together

D1 Level Student:
Unconsciously Incompetent
Consciously Incompetent

S1 Supervision Level
Coach and Direct
Close proximity to student

Q1 Questioning Level
What or Remembering Phase
Target foundational knowledge

Ask D1 students lots of Q1 level questions BUT you should also include a few Q2 level questions as well, and 1 Q3 level if appropriate.
Putting S and Q Together

**D2 Level Student:**
Consciously Competent

**S2 Supervision Level**
Support
Increased distance from student

**Q2 Questioning Level**
So What or Using Phase
Stimulating Application of knowledge

**D3 Level Student:**
Unconsciously Competent

**S2 Supervision Level**
Delegate
Peripheral Presence
“see & hear”

**Q3 Questioning Level**
Now What or Creating Phase
Stimulating Critical Thinking and Problem Solving
Adding Feedback
Feedback

The Purpose of Feedback is to:
- To confirm or reinforce behavior
- To correct behavior
- To promote improvement in future performance

(Nottingham & Henning, 2014)
The Components of Feedback are:

**TIMING:** Immediate or delayed

**SPECIFICITY:** General or specific

**CONTENT:** Clinical skills or clinical reasoning

(Nottingham & Henning, 2014)
FORM:
Verbal, non-verbal, written

PRIVACY:
Public or private

(Nottingham & Henning, 2014)
SQF Model: Feedback

- 3 Types: Confirm, Correct and Guide
- **Confirming Feedback**
  - Feedback that lets the student know that his or her knowledge and skills are correctly being applied. Simply stated; what the student is stating is accurate and what they are doing is correct and you are confirming this for the student.
  - Targets student’s basic knowledge and skills and is used to confirm and reinforce appropriate behaviors and knowledge.
  - Confirming statements can be provided both during activity and afterwards, and publicly or privately as appropriate. The feedback should be specific and can be delivered using verbal, non-verbal and written methods of communication.

*(Nottingham & Henning, 2014)*
SQF Model: Feedback

- 3 Types: Confirm, Correct and Guide

**Corrective Feedback**

- Feedback that lets the student know when his or her knowledge and/or skills are not on target. Either the skill was applied incorrectly or a concept was stated in accurately.
- Targets student’s basic knowledge and skills and is used to prevent students from developing incorrect techniques or believing inaccurate statements.
- Corrective statements should be provided in a non-confrontational way, and if at all possible, not in front of patients or peers. Depending on situation, may be provided immediately or delayed. The feedback should be specific and can be delivered using verbal, no-verbal and written methods of communication.

(Nottingham & Henning, 2014)
SQF Model: Feedback

- 3 Types: Correct, Confirm and Guide

Guiding Feedback

- Feedback that reinforces and advances a student’s current skill and knowledge level. May be paired with corrective and confirming statements, to direct the student in how he or she can improve and refine skills and knowledge. Also used to direct the student toward additional resources.

- Targets student’s advanced knowledge and skills and is used to transition the student from relaying on basic skills and knowledge or “habits” to working toward continual refinement and advancement.

- Guiding feedback can be provided both during activity and afterwards, and publicly or privately as appropriate. The feedback should be specific and can be delivered using verbal, no-verbal and written methods of communication.
Feedback: Examples

Scenario 1:

Student: “My patient’s blister looks infected; I am going to scrub it out with peroxide, okay?

Preceptor corrective feedback statement: “You are correct, this site is infected; however, peroxide is not the appropriate solution to use in this situation. Let’s rinse the site first using high pressure sterile saline and see what we have.”

Preceptor guided feedback statement: “I agree it looks infected. Peroxide is a very harsh treatment; what other options are available to you to treat this condition? What does the evidence suggest to be a better alternative?”
SQF: Putting It All Together

- For students whose knowledge and experience is limited—(D1 level students) situational supervision is high (S1 style); meaning the preceptor stays very closely monitors the student’s actions, providing constant direction.
- Q1 Level Questions prevail
SQF: Putting It All Together

As knowledge and experience base begins growing (D2 learners), situational supervision begins to lower (S2); meaning that the preceptor gradually begins to allow greater student autonomy in decision making while still monitoring student’s actions.
SQF: Putting It All Together

For students with increased experience, and who demonstrate varying degrees of proficiency, (D3 learners), situational supervision transitions to one of delegation (S3); meaning that the preceptor provides more and more opportunity for student autonomy in decision making. For D3 learners, the preceptor should use mostly Q2 and Q3 level questions.
SQF: Putting It All Together

Feedback is provided constantly throughout all interactions with students, regardless of the student’s knowledge and experience base. Feedback can be used to confirm, correct or guide a student. Effective feedback has five components: timing, specificity, content, form and privacy.
SQF: Putting It All Together

The level of supervision you provide, the type of questions you ask and the type of feedback you provide will always depend on the situation.

The situation consists of the leaner (D1, D2, 3), the task, the urgency, and the consequences.

The goal is to assist the student in developing a model for thinking that facilitates their critical thinking skills and ability to make sound clinical judgments.
Homework for Break Out

O Think of a situation that includes a learner, a task, a level of urgency and consequences.

O Create a list of questions for each questioning level (Q1, Q2, Q3) that would be appropriate to ask within the situation you created.

O Consider which situational supervision style would be most appropriate for the situation you created.
Thank you
References


- Barnum M. Questioning skills demonstrated by Approved Clinical Instructors during field experiences. *J Athl Train.* 2008 May-Jun; 43(3): 284–292


Facilitating Supervised Autonomy

_Supervised Autonomy_ means providing varying degrees of direct supervision to foster independent, but guided application of clinical proficiencies and critical thinking skills (Sexton et al, 2009). The degree of supervision provided needs to match the individual student’s level of clinical competency: it is a continuum that moves the student from being dependant on their clinical preceptors to being autonomous decision makers and health care providers. The key point, however, is that the student is always supervised: the way in which the supervision is provided is what changes.

There are several clinical learning and skill acquisition models that can be used to facilitate supervised autonomy. We have introduced models at various preceptor development workshops over the years and will continue to revisit them from time to time. I have included a brief overview of these models for you.

**Clinical Teaching Strategies**

Clinical experiences serve as catalyst to move student learning beyond basic memorization of facts, recollection of definitions, and repetition of protocols and identification of concepts. Each interaction during the experience provides opportunity for developing the complex cognitive abilities of critical consideration and analysis. The preceptor is there to assist the student in developing advanced level thinking abilities that are needed to obtain clinical proficiency and in achieving supervised autonomy. The key to understanding this progression lies with becoming familiar with Bloom’s Taxonomy of Educational Objectives.

**Bloom’s Taxonomy of Educational Objectives**

Bloom identified a hierarchical continuum of cognitive processing abilities: knowledge, comprehension, application, analysis, synthesis and evaluation (Bloom, 1956). Since then, Bloom’s Taxonomy has been the foundation for creating learning experiences intended to facilitate a student’s ability to develop complex and advanced schema.

![Bloom's Taxonomy for Thinking](image)

Overbaugh and Schultz (n.d.) revised and updated Bloom’s original taxonomy to put into modern terms. Using Bloom’s original terminology or the updated version, this continuum is consistent with Supervised Autonomy. We are continually seeking opportunities to move the student from utilizing cognitive skills consistent with being a technician to developing knowledge and skills consistent with being an autonomous health care provider.
**Questioning**

*Questioning Strategy:* Orlich et al. (1990) defined questioning strategy as the way questions are phrased, timed, sequenced and delivered in order to stimulate multiple levels of cognitive processing and enhance learning. Questioning is the fundamental skill on which all other teaching strategies are based and utilizes Bloom’s Taxonomy. Questions can be phrased to target specific cognitive processing along six increasingly complex levels as well as to access the four adaptive learning modes associated with experientially based learning.

During clinical experiences, asking the student questions that target varying cognitive processing levels help students to connect prior learning to current context, assist in the formation of patterns and relationships between conceptual knowledge and application knowledge, foster critical thinking, and promote the development of clinical proficiency.
**Funneling (Kolb, 1984)**

Funneling as a questioning strategy involves moving the learner through the cognitive processing levels from the most basic level to the most advanced. Funneling involves a three-staged sequence of questions.

**Stage One: WHAT?** Ask questions that allow the student to identify what they know to be true about the experience, interaction or skill. This involves reciting factual, declarative information or summarizing what happened. This stage of questioning should target knowledge and comprehension cognitive processes.

**Stage Two: SO WHAT?** Questions are asked that require the students to derive meaning from what they know to be true and how the information relates. This stage of questioning should target application and analysis cognitive processes.

**Stage Three: Now WHAT?** Questions are asked that require the student to put all the information together and to develop opinions, perspectives and solutions. The student should be able to support and defend their decisions as well as predict consequences of actions/decisions. This stage of questioning should target synthesis and evaluation cognitive processes.

**Socratic Method of Questioning**

This method of questioning is best illustrated by this statement: “My teacher never gives me the answer. They just keep asking me questions until I figure it out for myself”. In this method, you ask very specific questions that allow the learner to consider differing perspectives, evaluate their own performance, and check their own knowledge bank by the questions you ask of them.

**Benner's Stages of Clinical Competence** (Benner, 1984) with the Conscious Competency Model (Howell & Fleishman, 1982)

Benner established a model of skill acquisition based on the work of Dreyfus and applied to nursing. The Dreyfus model posits that in the acquisition and development of a skill, a student passes through five levels of proficiency: novice, advanced beginner, competent, proficient, and expert. These different levels reflect changes in three general aspects of skilled performance:

1. One is a movement from reliance on abstract principles to the use of past concrete experience as paradigms.
2. The second is a change in the learner's perception of the demand situation, in which the situation is seen less and less as a compilation of equally relevant bits, and more and more as a complete whole in which only certain parts are relevant.
3. The third is a passage from detached observation to involved performer. The performer no longer stands outside the situation but is now engaged in the situation.

**Stage 1: Novice**

Beginners have had no experience of the situations in which they are expected to perform. Novices are taught rules to help them perform. The rule-governed behavior typical of the novice is extremely limited and inflexible. As such, novices have no "life experience" in the application of rules. (Unconsciously incompetent).
Stage 2: Advanced Beginner
Advanced beginners are those who can demonstrate marginally acceptable performance, those who have coped with enough real situations to note, or to have pointed out to them by a mentor, the recurring meaningful situational components. These components require prior experience in actual situations for recognition. Principles to guide actions begin to be formulated. The principles are based on experience. (Consciously incompetent)

Stage 3: Competent
The competent performer develops schemes to distinguish less important from more important context. A plan establishes a perspective, and the plan is based on considerable conscious, abstract, analytic contemplation of the problem. The conscious, deliberate planning that is characteristic of this skill level helps achieve efficiency and organization. (Consciously competent)

Stage 4: Proficient
The proficient performer perceives situations as wholes rather than in terms of chopped up parts or aspects, and performance is guided by maxims. Learns from experience what typical events to expect in a given situation and how plans need to be modified in response to these events. The proficient performer can now recognize when the expected normal picture does not materialize. (Consciously Competent moving toward unconsciously competent)

Stage 5: The Expert (5+years of experience)
The expert performer no longer relies on an analytic principle (rule, guideline, and maxim) to connect her or his understanding of the situation to an appropriate action. The expert operates from a deep understanding of the total situation. The performer is no longer aware of features and rules; his/her performance becomes fluid and flexible and highly proficient. (Unconsciously competent)

Conscious Competency Model (Howell and Fleishman, 1982)
This model is student and task specific rather than simply student/level specific. The preceptor should realize that individual students will progress through these stages at differing rates and that student’s progress through these stages will also be task or skill specific.
Feedback
Feedback is any information that you give to your student regarding his or her skills and knowledge. Nottingham and Henning (2014) identified four main purposes for providing feedback to students during clinical experiences: to confirm, to reinforce, to correct, and to guide. Effective feedback has five elements: timing (immediate or delayed), specificity (general or specific), content (clinical skills or clinical reasoning), form (verbal, non-verbal or written) and privacy (public or private).

The SQF Model of Clinical Teaching (Barnum, Guyer, Levy & Graham, 2009)
The SQF Model combines concepts found in the educational literature on Bloom’s Taxonomy, Questioning, Benner’s Model of Skill Acquisition and the Conscious Competency Model with concepts found in the management literature on leadership and feedback in the clinical education setting. The SQF Model of clinical teaching provides the preceptor with a practical way to integrate Supervision, Questioning, and Feedback into the clinical learning experiences that he or she provides for his or her students. It is a holistic approach to mentoring students that encompasses several different skills, allowing the preceptor to directly mentor his or her students in a way that moves the student toward clinical autonomy.

Breaking Down SQF: Supervision (Levy et al, 2009)
The type of supervision you provide should be based on the situation. Situational supervision requires the preceptor to use a supervisory style that matches the needs of the learner in each given situation. Supervision style should match the student’s level of development

Breaking Down SQF: Questioning (Barnum, 2005)
The type of questioning pattern you use should be strategic. The purpose of Strategic Questioning is to actively engage and stimulate the student to use increasingly complex cognitive processing skills; to assist the student in developing a model for thinking and assist the student with making appropriate and accurate clinical decision.

Breaking down SQF: Feedback (Nottingham & Henning, 2014)
Feedback is any information that you give to your student regarding their skills and knowledge and can be delivered via verbal, written or behavioral transmission. Feedback is provided to confirm, reinforce, correct and guide. Most important is that feedback must be timely and specific.

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<tr>
<th>Student Level of Development</th>
<th>Supervision Style</th>
<th>Strategic Questioning</th>
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<tbody>
<tr>
<td>D1: Unconsciously incompetent</td>
<td>S1: Coach and Direct</td>
<td>L1: What/remembering foundational knowledge</td>
</tr>
<tr>
<td>Consciously incompetent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2: Consciously Competent</td>
<td>S2: Support</td>
<td>L2: So what/using</td>
</tr>
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References:


