

AM Last Page: The Script Concordance Test: A Tool for Assessing Clinical Data Interpretation Under Conditions of Uncertainty

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The Script Concordance Test (SCT)¹ is currently used for assessment across the spectrum of health professions education, from pre-clinical training to continuing professional development. The response format reflects the way information is processed in authentic clinical problem-solving situations. In contrast to most conventional written assessment tools, the SCT employs a scoring system that acknowledges an important reality in clinical practice: that even experienced clinicians often interpret data, make judgments, and respond to uncertain clinical situations in ways that vary.

Stimulus and Response Format

The test stimulus consists of a short, ill-defined clinical scenario, followed by a set of independent questions. Each question features three columns (see example at right).

Column 1: Provides a hypothesis in the form of a diagnostic possibility, an investigative option, or a therapeutic alternative.

Column 2: Presents a new piece of clinical information.

Column 3: Contains a Likert-type response scale (usually ranging from +2 to -2).

Clinical scenario: You are evaluating a 63-year-old woman with left-sided weakness in the emergency department of your hospital.

If you were thinking...	And then you find...	Your hypothesis becomes...				
Q1. Brain abscess	Patient had dental work 10 days ago	-2	-1	0	+1	+2
Q2. Stroke	Patient uses a vaginal estrogen cream once daily	-2	-1	0	+1	+2
Q3. Brain metastasis	Normal contrast-enhanced CT head	-2	-1	0	+1	+2

-2: Ruled out or almost ruled out; -1: Less likely; 0: Neither more nor less likely; +1: More likely; +2: Certain or almost certain.

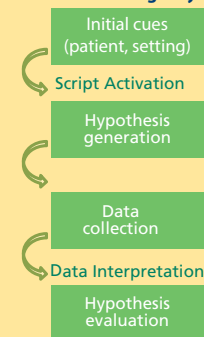
Test Rationale

Script theory proposes that health professionals draw from organized knowledge networks called illness scripts² to guide their clinical reasoning during patient encounters.

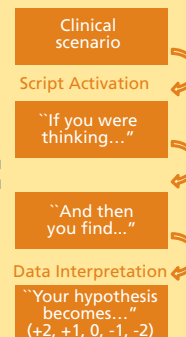
The SCT's three columns correspond to three key stages of the clinical reasoning process: hypothesis generation ("If you were thinking..."), data collection ("And then you find..."), and hypothesis evaluation ("Your hypothesis becomes..."), respectively (see diagram at right).

For each question, the examinee is asked to evaluate the impact of new clinical information on the illness script activated in his or her mind by the given hypothesis.

Clinical reasoning: Key steps



SCT format



Administration and Scoring

- SCT can be administered on paper or online.
- SCTs featuring 20 to 25 cases, each with 3 to 4 nested questions, generally provide reliable test scores.^{3,4}
- The examinee's response to each question is compared with those of the members of a reference panel of experienced clinicians (see table at right).

Example score key for Q1 above (using a panel of 10 members)

Answer	-2	-1	0	+1	+2
Number of panelists who chose this answer	0	0	4	5	1
Divide by number of panelists who chose modal answer	0	0	4/5	5/5	1/5
Score for Q1	0	0	0.8	1.0	0.2

- SCT is used to assess a specific aspect of clinical reasoning competence: clinical data interpretation under conditions of uncertainty.¹
- In general, sound evidence supports the validity, reliability, and feasibility of SCT.^{3,4}
- Research investigating optimal methods for selecting panel members, scoring, and standard setting for SCT is ongoing.^{3,5}
- Practical, evidence-based recommendations exist to guide the construction of a script concordance test.⁶
- SCT could be used strategically among a battery of tests designed to probe other specific components of the clinical reasoning process (e.g., hypothesis generation and data collection).³

References

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