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The 4R Operational Diagnosis Protocol: Part 1–R1: Patient Report and Rapport

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Abstract

Background: Traditional endodontic diagnostic models frequently exhibit shortcomings in their scientific basis, often relying on clinical tradition rather than structured biological principles. To address this gap, the 4R Operational Diagnosis Protocol was developed. This interview manuscript focuses on the first critical phase of this protocol, **R1: Report and Rapport**, exploring its philosophy, execution, and role in patient care.

Methods and Findings: The clinical framework of the 4R protocol is divided into four structured dimensions: R1 (Patient Report), R2 (Radiographic Findings), R3 (Response Testing), and R4 (Restorative and Structural Assessment). This paper specifically analyzes the R1 component, which utilizes the Patient Pain Profile Questionnaire (PPPQ)—a 55-descriptor clinical tool—alongside a disciplined five-minute intraoral examination and a structured one-on-one feedback session to convert subjective patient symptoms into objective, clinically actionable data.

Conclusions: R1 is not a routine clinical intake but a structured diagnostic event. By systematic integration of patient communication, objective behavioral observation, and color-coded diagnostic frameworks, R1 establishes a human connection and a reliable clinical foundation that guides the clinician toward an accurate, definitive diagnosis.

Keywords

4R Protocol; Operational Diagnosis; Endodontics; Patient Pain Profile Questionnaire; Clinical Screening; Doctor-Patient Rapport.

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Introduction

In this exclusive series, we explore the ”4R Operational Diagnosis Protocol” developed by Prof. Marwan Abou-Rass. This installment focuses on R1, the critical first encounter where the clinician builds rapport and transforms the patient’s subjective experience into actionable clinical data. The origin of structured diagnostic protocols in endodontics stems from a recognized gap between scientific literature and day-to-day patient care practices. Clinical decisions have historically been based on tradition and personal habits rather than strict evidence-based thinking. This manuscript presents a formal, structured interview detailing the clinical philosophy, operational parameters, and deployment of **R1: Report and Rapport**, the fundamental first phase of the 4R Operational Diagnosis Protocol.

Interview: Clinical Dialogue and Protocol Breakdown

Q1. Why did you develop the 4R Operational Diagnosis Protocol?

Answer: The origin of the 4R Operational Diagnosis Protocol goes back to my graduate training at the University of Pittsburgh in the 1970s. During that time, I recognized a significant gap between our scientific literature seminars and patient care practices, particularly in endodontic diagnostics. Clinical decisions were often based on tradition and personal practices rather than biological principles and evidence-based thinking.

While pursuing my doctoral degree in dental education, I had the opportunity to restructure diagnostic teaching. My early work focused on replacing simplistic and unreliable diagnostic methods with a structured, clinically meaningful system. The term “Operational” reflects my philosophy rooted in action. “Operationalism” guides the clinician toward a definitive diagnosis rather than a tentative one, as taught in dental school. It embodies a philosophy of openness and observation.

Decades later, the Swedish Council on Health Technology Assessment (SBU) published a report in June 2012 titled “Methods of Diagnosis and Treatment in Endodontics: A systematic review”. **They concluded: “This systematic overview discloses extensive shortcomings in the scientific basis underlying methods applied for endodontic diagnoses and treatment.” The council recommended:** “Would be desirable to reach consensus on guidelines to support endodontic diagnosis and treatment procedures.”

The 4R protocol was developed to address this gap by providing a systematic method for gathering, organizing, and interpreting diagnostic information based on:

- **R1 Patient Report:** Consists of 5 Presentations on the First Encounter, Patient Pain Profile, the Intraoral Five-Minute Examination, and the One-on-One session.
- **R2 Radiographic Findings:** Consists of 10 Presentations. Introduces the 10 ADI (10 Areas of Diagnostic Interest). Where Periapical radiographs speak.
- **R3 Response Testing:** Consists of 6 Presentations of best practices in endodontics and periodontics diagnostics.
- **R4 Restorative and Structural Assessment:** Consists of 12 Presentations that highlight and integrate, based on evidence, the relationship between the restorations and endodontics.

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Once the 4Rs data is collected, the clinician should have 8 Report Findings to create a problem list for treatment planning and presenting cases to the patient.

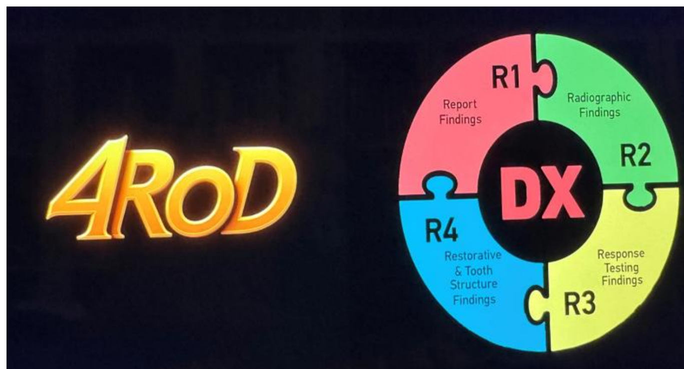

Figure 1: The 4R Operational Diagnosis (4RoD) Framework.

Q2. Why does your 4R Operational Diagnosis Protocol begin with R1: Report and Rapport?

Answer: Because diagnosis does not begin with the tooth—it begins with the patient. Before radiographs, before testing, and before treatment planning, the clinician must understand the patient's symptoms, behavior, emotional state, and expectations. R1 establishes both the human connection and the clinical foundation for all diagnostic decisions. "R1 transforms subjective pain into objective diagnostic data."

Q3. How does PPPQ fit into R1?

Answer: The Patient Pain Profile Questionnaire (PPPQ) is a structured diagnostic tool comprising 55 clinically relevant descriptors that enable patients to describe their symptoms and accurately express their pain experience, rather than relying on vague or inconsistent patient narratives. The PPPQ was developed to indirectly cover the classical signs of oral and dental pain diagnostic parameters:

- Site
- Quantity
- Quality
- Initiation
- Duration
- Subsidence
- Functional impact
- Systemic and emotional factors

This converts the patient's complaint from a subjective story into organized, clinically actionable data.

A key strength of PPPQ is its color-coded diagnostic framework, which guides the clinician toward likely diagnostic categories:

- **Yellow** → Past & Present Dental & Medical History (Descriptors 1–16)

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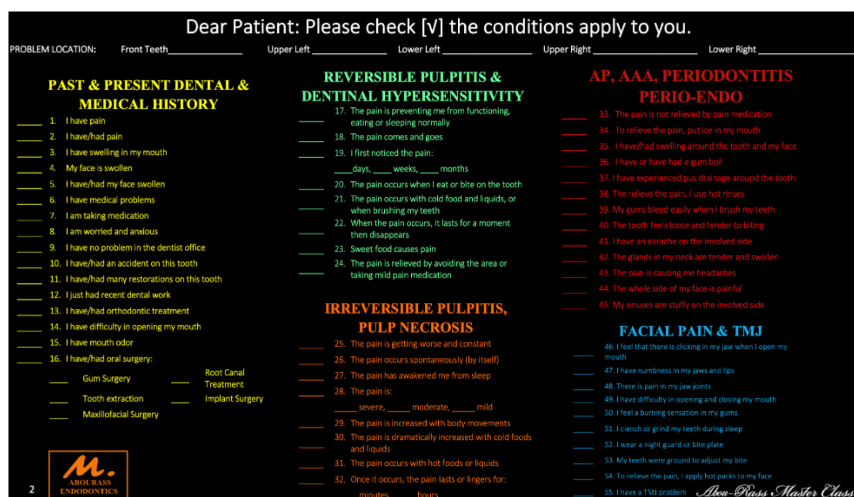
- **Green** → Reversible Pulpitis & Dentinal Hypersensitivity (Descriptors 17–24)
- **Orange** → Irreversible Pulpitis, Pulp Necrosis (Descriptors 25–32)
- **Red** → AP, AAA, Periodontitis, Perio-Endo (Descriptors 33–45)
- **Blue** → Facial Pain & TMJ (Descriptors 46–55)

PPPQ does not replace clinical judgment—it enhances it by structuring the patient's voice into a diagnostic language.



Dear Patient: Please check [√] the conditions apply to you.

PROBLEM LOCATION: Front Teeth____ Upper Left ____ Lower Left ____ Upper Right ____ Lower Right ____

PAST & PRESENT DENTAL & MEDICAL HISTORY

____ 1. I have pain
____ 2. I have/had pain
____ 3. I have swelling in my mouth
____ 4. My face is swollen
____ 5. I have/had my face swollen
____ 6. I have medical problems
____ 7. I am taking medication
____ 8. I am worried and anxious
____ 9. I have no problem in the dentist office
____ 10. I have/had an accident on this tooth
____ 11. I have/had many restorations on this tooth
____ 12. I just had recent dental work
____ 13. I have/had orthodontic treatment
____ 14. I have difficulty in opening my mouth
____ 15. I have mouth odor
____ 16. I have/had oral surgery:
____ Gum Surgery ____ Root Canal Treatment
____ Tooth extraction ____ Implant Surgery
____ Maxillofacial Surgery

REVERSIBLE PULPITIS & DENTINAL HYPERSENSITIVITY

____ 17. The pain is preventing me from functioning, eating or sleeping normally
____ 18. The pain comes and goes
____ 19. I first noticed the pain:
____days, ____weeks, ____months
____ 20. The pain occurs when I eat or bite on the tooth
____ 21. The pain occurs with cold food and liquids, or when brushing my teeth
____ 22. When the pain occurs, it lasts for a moment then disappears
____ 23. Sweet food causes pain
____ 24. The pain is relieved by avoiding the area or taking mild pain medication

IRREVERSIBLE PULPITIS, PULP NECROSIS

____ 25. The pain is getting worse and constant
____ 26. The pain occurs spontaneously (by itself)
____ 27. The pain has awakened me from sleep
____ 28. The pain is:
____ severe, ____ moderate, ____ mild
____ 29. The pain is increased with body movements
____ 30. The pain is dramatically increased with cold foods and liquids
____ 31. The pain occurs with hot foods or liquids
____ 32. Once it occurs, the pain lasts or lingers for:
____ minutes, ____ hours

AP, AAA, PERIODONTITIS PERIO-ENDO

____ 33. The pain is not relieved by pain medication
____ 34. To relieve the pain, put ice in my mouth
____ 35. I have/had swelling around the tooth and my face
____ 36. I have or have had a gum boil
____ 37. I have experienced pus drainage around the tooth
____ 38. The relieve the pain, I use hot rinses
____ 39. My gums bleed easily when I brush my teeth
____ 40. The tooth feels loose and tender to biting
____ 41. I have an earache on the involved side
____ 42. The glands in my neck are tender and swollen
____ 43. The pain is causing me headaches
____ 44. The whole side of my face is painful
____ 45. My sinuses are stuffy on the involved side

FACIAL PAIN & TMJ

____ 46. I feel that there is clicking in my jaw when I open my mouth
____ 47. I have numbness in my jaws and lips
____ 48. There is pain in my jaw joints
____ 49. I have difficulty in opening and closing my mouth
____ 50. I feel a burning sensation in my gums
____ 51. I clench or grind my teeth during sleep
____ 52. I wear a night guard or bite plate
____ 53. My teeth were ground to adjust my bite
____ 54. To relieve the pain, I apply hot packs to my face
____ 55. I have a TMJ problem

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Figure 2: Patient Pain Profile Questionnaire (PPPQ) Framework.

Q4. In R1, you emphasized a five-minute intraoral examination. Why?

Answer: The five-minute intraoral examination is a disciplined, systematic screening performed regardless of the chief complaint. First, I want to know more about my patient, and second, to assure the patient that not only will we take care of their emergency and the reasons for their visit, but we are also comprehensive clinicians who will give free advice that goes far beyond the patient's chief complaint. It is not a comprehensive exam; the intraoral exam will determine whether the patient needs a more comprehensive exam based on that quick review.

A quick but systematic intraoral examination can reveal many diagnostic clues before advanced procedures are considered. It allows the clinician to observe oral health status, restorations, soft tissues, swelling, sinus tracts, periodontal signs, caries, cracks, and emergency needs. The intraoral exam is not a casual look; it is a highly disciplined clinical screening that not only focuses on the chief complaint but also prepares you for the one-on-one feedback session.

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Figure 3: Marwan Abou-Rass. DDS, MDS, Ph.D. USC. Professor Emeritus

Q5. What is the role of one-on-one feedback with the patient?

Answer: The one-on-one feedback session is a key moment where the clinician confidently communicates the findings of the intraoral exam in a clear and meaningful way. This session aims not just to inform the patient about their immediate issue but also to foster a sense of personal care and attention—creating a feeling of genuine caring. It serves to inform, educate, motivate, and address concerns as necessary.

Closing statement

R1 is not a routine intake—it is a structured diagnostic event. It transforms the first doctor-patient encounter into a meaningful clinical process in which patient communication, behavioral observation, and the structured collection of diagnostic data come together to guide an accurate, definitive diagnosis.

Declarations

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Competing Interests: The author declares no competing financial or professional conflicts of interest.

References

1. Swedish Council on Health Technology Assessment (SBU). (2012) Methods of Diagnosis and Treatment in Endodontics: A systematic review. Stockholm: SBU. Report No. 212.
2. Abou-Rass M. (1982) The Diagnostic Problem: AO. 75:353-60.