

# Ayurvedic Clinical Case Reporting: Need for Development of Consensus-based Supplementary Guidelines to Case Reporting Guidelines

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## ABSTRACT

**Introduction:** A clinical case report is a detailed narration that describes a medical problem for medical, scientific, or educational purposes, experienced by a medical practitioner in one or several patients. The case report (CARE) guidelines are designed to increase the completeness, accuracy and transparency of the case reports and also provide early signals of benefit, harm and value. Though many of the authors are publishing Ayurvedic case reports based on CARE guidelines but there is no uniformity of reporting Ayurvedic parameters among them. And till date no reporting guidelines based on Ayurvedic framework exists for Ayurvedic case reports. Diagnostic assessment and therapeutic intervention aspects of CARE checklist require Ayurvedic Specific Extension guidelines for Case reporting (AYUR-CASE).

**Materials and methods:** All the relevant material for developing Ayurvedic specific extension to the CARE clinical case reporting guidelines are collected from the major Ayurveda texts with their commentaries. Electronic databases such as "PubMed," "Google scholar search" and "Google search" were also used.

**Results:** A list of important diagnostic as well as therapeutic aspects viz., Panchalakshana nidana, Ashtasthana pariksha, Dashvidh pariksha, Sodhana, Shamana, Rasayana, etc., mentioned in various samhitas are collected. As the related information is extensively documented in Ayurveda scriptures so it is critical to prioritize and select the necessary parameters, for which expert consensus need to be arrived at and hence the techniques like Delphi can be adopted for successful development of the AYUR-CASE guidelines.

**Conclusion:** Ayurveda practice in the present day gives more valid results that are reproducible when the clinical approach and research protocol are based on fundamental principles of Ayurveda rather than the modern science. Hence to start a new chapter in the field of Ayurvedic Research—AYUR-CASE guidelines for case reporting has been proposed. These guide-

lines will help to achieve complete, accurate and transparent qualities of reporting clinical case reports in Ayurveda.

**Keywords:** Ayurveda, Ayurvedic case reporting guidelines, CARE guidelines, Case report, Delphi technique.

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## INTRODUCTION

A clinical case report is a detailed narration that describes a medical problem for medical, scientific, or educational purposes, experienced by a medical practitioner in one or several patients. The acronym CARE was created from the words case reports. It was developed by an international group of experts and first presented at the International Congress on Peer Review and Scientific Publication in 2013.<sup>1</sup> The CARE guidelines are designed to increase the completeness, accuracy, and transparency of the case reports and also provide early signals of benefit, harm, and value. They provide evidence for effectiveness in a real-world setting, whereas clinical trials provide evidence for the efficacy of interventions in a controlled setting.<sup>2</sup> As a supplement in the year 2015, HOM-CASE guidelines were developed to improve the quality of reporting clinical case reports in homeopathy.<sup>3</sup> Till date, no reporting guidelines based on Ayurvedic parameters exist for Ayurvedic case reports. Although many of the authors are publishing Ayurvedic case reports based on CARE guidelines, there is no uniformity of reporting Ayurvedic parameters among them.

## MATERIALS AND METHODS

All the relevant material for developing Ayurvedic specific extension to the CARE clinical case reporting guidelines are collected from the major Ayurveda texts with their commentaries. Electronic databases, such as PubMed, Google Scholar Search, and Google search were searched using the following keywords: CARE guidelines, consensus methods, Homeopathic care guidelines,

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**Table 1:** CARE checklist (2013)

Topic	Item	Checklist item description	Reported on page
Title	1	The words "case report" should be in the title along with what is of greatest interest in this case	
Keywords	2	The key elements of this case in 2 to 5 keywords	
Abstract	3a	Introduction—what is unique about this case? What does it add to the medical literature?	
	3b	The main symptoms of the patient and the important clinical findings	
	3c	The main diagnoses, therapeutics interventions, and outcomes	
	3d	Conclusion—what are the main "takeaway" lessons from this case?	
Introduction	4	Brief background summary of this case referencing the relevant medical literature	
Patient information	5a	Demographic information (such as age, gender, ethnicity, occupation)	
	5b	Main symptoms of the patient (his or her chief complaints)	
	5c	Medical, family, and psychosocial history including comorbidities, and relevant genetic information	
	5d	Relevant past interventions and their outcomes	
Clinical findings	6	Describe the relevant physical examination (PE) findings	
Timeline	7	Depict important milestones related to your diagnoses and interventions (table or figure)	
Diagnostic assessment	8a	Diagnostic methods (such as PE, laboratory testing, imaging, questionnaires)	
	8b	Diagnostic challenges (such as financial, language, or cultural)	
	8c	Diagnostic reasoning including other diagnoses considered	
	8d	Prognostic characteristics (such as staging in oncology) where applicable	
Therapeutic intervention	9a	Types of intervention (such as pharmacologic, surgical, preventive, self-care)	
	9b	Administration of intervention (such as dosage, strength, duration)	
	9c	Changes in intervention (with rationale)	
Follow-up and outcomes	10a	Clinician-assessed outcomes and when appropriate patient-assessed outcomes	
	10b	Important follow-up test results	
	10c	Intervention adherence and tolerability (How was this assessed?)	
	10d	Adverse and unanticipated events	
Discussion	11a	Discussion of the strengths and limitations in the management of this case	
	11b	Discussion of the relevant medical literature	
	11c	The rationale for conclusions (including assessment of possible causes)	
	11d	The main "takeaway" lessons of this case report	
Patient perspective	12	Did the patient share his or her perspective or experience? (include when appropriate)	
Informed consent	13	Did the patient give informed consent? Please provide, if requested	Yes ___ No ___

Adapted from Gagnier et al<sup>1</sup>

Ayurvedic care guidelines, Ayurvedic case reports for relevant articles published till November 2017.

## CARE CHECKLIST AND DEVELOPING AYUR CASE GUIDELINES

The CARE checklist (2013) has included a list of 13 items, the information of which is to be recorded while writing a case report (Table 1). The CARE checklist item numbers 8 and 9: Diagnostic assessment and therapeutic intervention respectively, require Ayurvedic specific (AYUR-CASE) extension to the CARE clinical case reporting guidelines. These AYUR-CASE guidelines are required to achieve complete, accurate, and transparent qualities of reporting clinical case reports in Ayurveda.

### Clinical Diagnosis in Ayurveda

Across various *Samhitas* (scriptures), the information related to the diagnostic aspects has been mentioned,

as pertinent to the point of discussion/study. Attempt is made to list such important diagnostic aspects here:

### *Panchalakshana Nidana*<sup>4</sup>

Five factors of identification of diseases:

1. *Nidana/Hetu* (etiology/causative factors)
2. *Poorvarupa* (prodromal symptoms)
3. *Rupa/Linga* (cardinal signs and symptoms)
4. *Upashaya/Anupashaya* (assuagement)
5. *Samprapti* (pathogenesis of disease). A timeline for depicting *samprapti* of the disease can be proposed.

### *Ashtasthana Pariksha*<sup>5</sup>

It considers eight various aspects for diagnosis purpose:

1. *Nadi Pariksha* (examination of the pulse)
2. *Jivha Pariksha* (examination of the tongue)
3. *Shabda Pariksha* (examination of voice and sound)
4. *Sparsha Pariksha* (examination by touch)

5. *Drka Pariksha* (examination of eyes)
6. *Akruti Pariksha* (examination of general appearance)
7. *Mutra Pariksha* (examination of urine)
8. *Mala Pariksha* (examination of stool)

### *Dashvidh Pariksha*<sup>6</sup>

This approach utilizes following 10 factors for making decision regarding the *bala* (strength) of the *roga* (disease) and *rogi* (patient):

- *Prakriti* (physical constitution)
- *Vikruti* (pathological condition)
  - *Dosha* (deranged regulatory functional factors of the body)
  - *Dushya* (deranged major structural components of the body)
  - *Sthana* (site of localization)
  - *Agni* (digestive/metabolic factors)
  - *Srotas* (structural or functional channels)
  - *Avastha* (stage of disease)
  - *Rogamarga* (pathway of disease manifestation)
  - *Sadhyaasadhya* (prognosis)
- *Sara* (excellence of tissues)
- *Samhanana* (body compactness)
- *Pramana* (measurements of body parts)
- *Satmya* (homologation)
- *Sattva* (mental constitution)
- *Aharashakti* (capacity to ingest food and capacity to digest and assimilate the food)
- *Vyayamashakti* (capacity to exercise)
- *Vaya* (age)

### Therapeutic Intervention in Ayurveda

The following parameters may be included for reporting in the therapeutic section of the CARE checklist as part of AYUR-CASE guidelines:

- Line of treatment planned based on the *samprapti* of the disease
- Rationality of therapeutic administration based on the *avastha* of the disease
- *Antarparimarjana* (internal therapies)
- *Bahirparimarjana* (external therapies)
- *Shastrapranidhana* (surgical procedures)
- *Shodhana* (bio-cleansing therapy/major purification therapy)
- *Shamana* (palliative procedures)
- *Rasayana* (rejuvenation and revitalization therapy)
- *Daivavyapashraya* (spiritual therapy)
- *Yuktivyapashraya* (logic-based treatment)
- *Sattvavajaya* (subjugation of mind/counseling)
- *Pathyapathya* (regulation of diet and regimens)

### Delphi Technique: Consensus Method for Medical Research

To develop AYUR-CASE extension guidelines, a consensus needs to be arrived with respect to various Ayurveda parameters related to diagnosis and therapeutics. And one of the better methods to arrive consensus for medical research is Delphi technique. It is mainly developed by Dalkey and Helmer<sup>7</sup> at the Rand Corporation in the 1950s which is a widely used and accepted method for achieving convergence of opinion concerning real-world knowledge solicited from experts within certain topic areas.<sup>8</sup>

The Delphi process takes its name from the Delphic oracle's skills of interpretation and foresight, and proceeds in a series of rounds as follows:

#### Round 1

Either the relevant individuals are invited to provide opinions on a specific matter, based on their knowledge and experience, or the team undertaking the Delphi expresses opinions on a specific matter and selects suitable experts to participate in subsequent questionnaire rounds. These opinions are grouped together under a limited number of headings and statements drafted for circulation to all participants on a questionnaire.

#### Round 2

Participants rank their agreement with each statement in the questionnaire. The rankings are summarized and included in a repeat version of the questionnaire.

#### Round 3

Participants rerank their agreement with each statement in the questionnaire, with the opportunity to change their score in view of the group's response. The rerankings are summarized and assessed for degree of consensus: if an acceptable degree of consensus is obtained, the process may cease, with final results fed back to participants; if not, the third round is repeated.<sup>9</sup>

### DISCUSSION

Ayurveda is a holistic science specified by its own galaxy of universally acceptable scientific principles and terminologies. The need for thorough clinical examination of the patient, for diagnosis, has been given paramount importance and is stated to be a prerequisite before planning a meticulous treatment.<sup>10</sup>

Further, it has been documented that if a physician is unable to diagnose a particular disease by name, he/she should not feel ashamed because it is not always

possible to give a definite name to all diseases. The same *Dosha* when aggravated may cause various diseases depending upon the various etiological factors and sites of manifestation. So, the physician needs to examine the three important factors, viz., *Samutthanavishesha* (the specific causative factors for disease manifestation), *Adhistanavishesha* (the site of manifestation of disease), and *Vikaraprakriti* (the nature of disease pathway) for successful management of the patient.<sup>11</sup>

The precision and accuracy of organizing medical care to a patient in a systemic manner is well described in Ayurveda at various points of relevance. In fact, the classical documents of Ayurveda clearly emphasize that the clinical success of a case without following the prescribed essential standard norms should be discarded as chance effect and not as treatment effect.<sup>12</sup>

Hence, the two key aspects of case reporting, viz., diagnosis and therapeutics, are given prime importance and were documented meticulously in various scriptures of Ayurveda, making quite a strong case for developing Ayurveda extension guidelines for case reporting.

But the information relating to diagnosis and intervention are extensively documented in Ayurveda scriptures and hence, it is critical to prioritize while selecting the necessary parameters to include in reporting guidelines, for which expert consensus need to be arrived at. So, to develop AYUR-CASE guidelines the techniques, such as Delphi can be adopted to arrive at consensus for medical research.

## CONCLUSION

From the above details, it can be inferred that Ayurveda practice in the present day gives more valid results that are reproducible when the clinical approach is based on fundamental principles of Ayurveda rather than the modern science. Hence, the science with such a rich tradition of scientific knowledge, principally in the context of diagnosis and management, should be explored to create new horizons for contemporary Ayurvedic

scholars and enable them to document their research work appropriately. So, to start a new chapter in the field of Ayurvedic Research, AYUR-CASE extension guidelines supplementary to the CARE guidelines for case reporting has been proposed.

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## हिन्दी सारांश

### आयुर्वेदीय चिकित्सकीय केस रिपोर्टिंग: केस रिपोर्टिंग दिशानिर्देशों में सहमति— आधारित पूरक दिशानिर्देशों के विकास की आवश्यकता

<sup>1</sup>अश्विन सी चिलुवेरी, <sup>2</sup>सुधा के चिलुवेरी, <sup>3</sup>जयप्रकाश बी राम

**प्रस्तावना:** केस रिपोर्ट एक या अनेक रोगियों द्वारा अनुभव किये गए किसी चिकित्सकीय समस्या का एक विस्तृत ब्यौरा होता है जिसका उपयोग चिकित्सीय, वैज्ञानिक या शैक्षणिक उद्देश्यों के लिए किया जा सकता है। CARE दिशानिर्देशों का निर्माण केस रिपोर्ट की सम्पूर्णता, सटीकता एवं पारदर्शिता में वृद्धि के साथ-साथ लाभ, नुकसान एवं महत्त्व के प्रारंभिक चिन्हों को उजागर करने के लिए किया गया है। हालाँकि कई लेखकों द्वारा CARE दिशानिर्देशों के अनुसार आयुर्वेदीय केस रिपोर्ट प्रकाशित किये जाते हैं, किन्तु उनमें आयुर्वेदीय सिद्धांतों के अनुरूप एकरूपता नहीं पाई जाती। और, अब तक, आयुर्वेदिक सिद्धान्तों के अनुरूप कोई केस रिपोर्ट दिशानिर्देश नहीं बना है। इसके लिए मौजूदा CARE दिशानिर्देशों में सूत्रित नैदानिक परीक्षणों (Diagnostic assessment) एवं चिकित्सकीय कार्यों (therapeutic intervention) के पहलुओं में आयुर्वेदीय वैशिष्ट्य युक्त कुछ सुधार (AYUR-CASE) की आवश्यकता है।

**सामग्री एवं विधि:** मौजूदा CARE दिशानिर्देशों में आयुर्वेदीय वैशिष्ट्य युक्त सुधार (AYUR-CASE) हेतु सम्बन्धित विषयों का संकलन आयुर्वेद के मुख्य ग्रंथों एवं उनकी टीकाओं से किया गया। साथ ही, इलेक्ट्रॉनिक डेटाबेस जैसे कि "PubMed", "Google scholar search" एवं "Google search" का भी उपयोग किया गया।

**परिणाम:** विभिन्न संहिताओं में उल्लेखित नैदानिक एवं चिकित्सकीय दृष्टि से महत्वपूर्ण पहलुओं जैसे कि पंचलक्षण निदान, अष्टस्थान परीक्षा, दशविध परीक्षा, शोधन, शमन, रसायन इत्यादि का संकलन किया गया। चूँकि सम्बन्धित विषयों का उद्धरण संहिताओं में बहुत ही विस्तृत है, अतः उनमें से आवश्यक मानदंडों के निर्धारण की प्रक्रिया को वरीयता देनी होगी, जिसके लिए विद्वानों की सहमति होना आवश्यक है। इस सहमति के लिए डेल्फी (Delphi) जैसे तकनीक का उपयोग करके AYUR-CASE दिशानिर्देशों को सफलतापूर्वक विकसित किया जा सकता है।

**निष्कर्ष:** आधुनिक दौर में आयुर्वेदीय चिकित्सा के परिणाम अधिक विश्वसनीय एवं पुनरुत्पादन-सक्षम हो सकेंगे यदि चिकित्सकीय दृष्टिकोण एवं रिसर्च-प्रारूप आयुर्वेद के मूलभूत सिद्धांतों पर आधारित होंगे न कि आधुनिक विज्ञान पर। अतः आयुर्वेदीय रिसर्च के क्षेत्र में एक नये अध्याय की शुरुवात करने के लिए AYUR-CASE दिशानिर्देशों को प्रस्तावित किया जाता है। इन दिशानिर्देशों के प्रयोग से आयुर्वेदीय केस रिपोर्ट की प्रस्तुति में सम्पूर्णता, सटीकता एवं पारदर्शिता विकसित होने में मदद हो सकेगी।

**कुंजी शब्द:** आयुर्वेद, आयुर्वेदिक केस रिपोर्टिंग दिशानिर्देश, CARE दिशानिर्देश, केस रिपोर्ट, डेल्फी तकनीक

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