

Sociodemographic and educational profile of the residency preceptor in a postgraduate program in medical education

Perfil sociodemográfico e educacional do preceptor de residência de um curso pós-graduação em educação médica

Márcia de Melo Rodrigues¹

marciacih@gmail.com

Sandra Mara Witkowski^{2,3}

sandrawtk@gmail.com

Luciana dos Santos Celia Fossari^{2,3}

lucacelia@gmail.com

Ana Alice Broering Eller³

anaalicebe@gmail.com

Henrique De Rocco Echeverria³

henrique.echeverria@outlook.com

Vitor Hugo Lima Barreto⁴

barretovitor@hotmail.com

ABSTRACT

Introduction: Medical residency is a form of specialized education where physicians undergo training in health units accredited by the National Medical Residency Commission (CNRM). In these programs, preceptors hold at least a medical residency certificate. However, there are no evaluative criteria regarding the pedagogical qualification, training, and skills required to perform the preceptor role in most of these postgraduate services. There are few studies in the literature on the sociodemographic and educational situation, satisfaction levels and remuneration for preceptorship.

Objective: This study aims to describe the sociodemographic and educational profile of Brazilian medical preceptors participating in a postgraduate medical preceptorship course in Brazil in 2022.

Method: This is a quantitative, descriptive study aiming at a cross-sectional, non-probabilistic survey of the sociodemographic and educational profile of Brazilian medical residency preceptors. Data collection was conducted between December 2022 and January 2023 through an electronic questionnaire using Google Forms, directed at participants of a Specialization Course in Medical Residency Preceptorship in Brazil.

Results: Among the 144 respondents, 70.8% are female, and the most prevalent age group is 40-49 years. The main states where they work are São Paulo, Minas Gerais, and Rio de Janeiro. Of the participants, 92.3% hold a medical residency certificate. Regarding the reason, 83.3% state they enjoy teaching. Concerning personal satisfaction, 64.5% feel satisfied "most of the time." Additionally, 83.3% of the institutions where they work are exclusively public and 61.1% do not receive a salary for performing the role. Lastly, 78.4% of the respondents reported that there is no performance evaluation at their workplace.

Conclusion: The participating preceptors predominantly have the experience and qualifications for the role, and enjoy their function, although many lack specific pedagogical training in preceptorship and most do not receive a salary for performing the task. The obtained data can contribute to implementing career plans, specific work hours, protected study time, wage floor, rights and duties, promoting the continuous improvement of residency teaching.

Keywords: Preceptorship; Education, Medical; Description, Job; Residency, Medical.

RESUMO

Introdução: A residência médica é uma modalidade de ensino e aprendizagem voltada à especialização, em que os médicos são submetidos a treinamento em unidades de saúde credenciadas pela Comissão Nacional de Residência Médica. Nesses programas, os preceptores possuem, no mínimo, o título de residência médica. Contudo, não há critérios avaliativos quanto à qualificação pedagógica, à capacitação e à habilidade para exercer a função na maioria desses serviços de pós-graduação. São escassos os estudos sobre a situação sociodemográfica educacional, o grau de satisfação e a remuneração dos preceptores.

Objetivo: O estudo tem como propósito descrever o perfil sociodemográfico e educacional do preceptor médico brasileiro, participante de um curso de pós-graduação em preceptoría médica no Brasil, no ano de 2022.

Método: Trata-se de um estudo quantitativo e descritivo que visa ao levantamento interseccional, não probabilístico, do perfil sociodemográfico e educacional do preceptor de residência médica brasileira. A coleta de dados foi realizada entre dezembro de 2022 e janeiro de 2023, por meio de questionário eletrônico utilizando o Google Forms dirigido aos participantes de um curso de especialização em preceptoría de residência médica no Brasil.

Resultado: Dos 144 entrevistados, 70,8% são do sexo feminino, com prevalência da faixa etária entre 40 e 49 anos. Os participantes atuam principalmente em São Paulo, Minas Gerais e Rio de Janeiro. Entre eles, 92,3% possuem certificado de residência médica. Quanto ao motivo da atuação, 83,3% afirmaram que gostam de ensinar. Sobre a satisfação pessoal, 64,5% a sentem "na maioria das vezes". Além disso, 83,3% das instituições em que trabalham são exclusivamente públicas, e 61,1% não recebem salário para tal função. Por fim, 78,4% dos entrevistados afirmaram que não há avaliação de desempenho no local de trabalho.

Conclusão: Os preceptores participantes predominantemente gostam da função e possuem experiência e qualificação para tal, embora muitos não tenham capacitação pedagógica específica em preceptoría, e a maioria não recebe salário para executar a tarefa. Os dados obtidos podem contribuir para implementar planos de cargos e carreiras, carga horária específica, tempo para estudo, piso salarial, direitos e deveres, promovendo melhoria do ensino de residentes.

Palavras-chave: Preceptoría; Educação Médica; Perfil Profissional; Residência Médica.

¹ Hospital Universitário Oswaldo Cruz, Recife, Pernambuco, Brasil.

² Hospital Infantil Pequeno Anjo, Itajaí, Santa Catarina, Brasil.

³ Universidade do Vale do Itajaí, Itajaí, Santa Catarina, Brasil.

⁴ Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil.

Chief editor: Rosiane Viana Zuza Diniz. | Associate editor: Aristides Palhares Neto.

Recebido em 15/10/24; Aceito em 03/06/25. | Evaluated by double blind review process.

INTRODUCTION

Medical residency is a specialisation type of teaching and learning (*lato sensu* postgraduate training), for doctors, who are subjected to a regime of practical and theoretical training in health units that support such a programme, accredited by the National Medical Residency Commission (CNRM). The title of specialisation acquired after completing residency is of great value to the doctor's résumé. In Brazil, health preceptorship is an activity carried out by professionals in the work setting and is characterised by in-service teaching¹. In university hospitals with a medical residency programme, preceptors must have completed at least a medical residency training recognised by the CNRM². However, in the vast majority of teaching hospitals, there are no theoretical or practical evaluation criteria in relation to pedagogical qualifications, training and the ability to fulfil this role.

It is known that teaching ability is not directly related to technical performance on the part of the teacher, and vice versa. Therefore, even if the preceptor performs their activities as an assistant doctor with excellence, it is not possible to say that they will also display a great performance and competence in teaching³. The medical residency preceptor is a learning facilitator and information provider and must develop competences such as technical mastery, communication skills, agile decision-making, management, leadership and encouraging continuing education⁴.

There are few studies available in the literature on the real sociodemographic and educational situation of Brazilian preceptors. There are also few studies that assess the level of satisfaction, paid preceptorship and other criteria pertinent to the role performed by Brazilian preceptors. Given that Brazil is a country of continental dimensions and that new medical schools have been accredited in the last twenty years⁵, it is difficult to map and monitor both the quantity and quality of undergraduate and postgraduate student preceptors in this area on an annual basis.

As a result, the main purpose of this study is to describe the sociodemographic and educational profile of Brazilian medical preceptors in a postgraduate course in medical preceptorship in Brazil, in order to provide data on the characteristics of these professionals.

METHODS

This is a quantitative, descriptive study aimed at an intersectional, non-probabilistic survey of the sociodemographic and educational profile of Brazilian medical residency preceptors. Data was collected between December 2022 and January 2023 using an electronic form using Google Forms aimed at Brazilian medical residency

preceptors participating in an online Specialisation in Medical Residency Preceptorship course in Brazil. The questionnaire was validated by administering it in advance to experienced preceptors in the field at random. The semi-structured digital form obtained sociodemographic and educational data from the preceptors of the medical residency specialisation course (age, gender, time since graduating in medicine, highest qualification, time spent as a preceptor, information on employment, satisfaction and others), with a total of 20 objective questions. Finally, the data was tabulated and analysed using Microsoft Excel, and descriptive analysis was carried out using percentages and absolute numbers to better visualise the results.

This survey presents little possibility of data collection bias, since the questions are personal and do not require specific technical knowledge. The inclusion criteria are Brazilian medical preceptors from a medical residency preceptorship specialisation course in 2022 in Brazil. The research participants signed an informed consent form. Incomplete online forms and participants whose e-mail address was unknown or incorrect were excluded. This study was approved by the Research Ethics Committee (CEP) of the Oswaldo Cruz German Hospital on 14/12/2022, under CAAE No. 65930222.6.0000.0070.

RESULTS

A total of 144 interviewees were included, 70.8% (n=102) of whom were female and 40-49 years old (n=62) was the most prevalent age group. The main Brazilian states where preceptors work are São Paulo (n=23), Minas Gerais (n=19) and Rio de Janeiro (n=19), respectively. With regard to the medical residency certificate, 92.3% (n=133) of those interviewed reported having one. The results of the survey of medical preceptors' educational data are described in Table 1. The areas of specialisation of the medical preceptors who took part in the survey are shown in Graph 1. The "other specialities" category was grouped by medical specialities which, separately, had no more than two preceptors representing the area. Among all the specialities, Internal Medicine and Paediatrics accounted for 12.7% (n=17) and 7.5% (n=10) respectively.

Among the participants, 38% (n=55) became preceptors due to a requirement of the service, 25% (n=36) through passing a test or competitive recruitment process and 20.1% (n=29) through invitation from colleagues, the latter representing the most prevalent response. Regarding the reason for working as a preceptor, 83.3% (n=120) said they enjoyed teaching. Furthermore, when asked about personal satisfaction with their work, 64.5% (n=93) were satisfied "most of the time". The survey of the working conditions of medical preceptors is described in Table 2.

Table 1. Survey of the educational data of medical preceptors of a national postgraduate resident doctor training course in 2022.

Educational data	Categories	n (%)
Time since graduating in medicine	Less than 5 years	1 (0.6%)
	5 years or more	14 (9.7%)
	10 years or more	22 (15.2%)
	15 years or more	107 (74.3%)
Time as a preceptor	Less than 5 years	36 (25%)
	5 years or more	35 (24.3%)
	10 years or more	30 (20.8%)
	15 years or more	43 (29.8%)
Specific training outside the course	Yes	34 (23.6%)
	No	110 (76.3%)
Acts as a preceptor in their area of specialisation	Yes	138 (95.8%)
	No	6 (4.2%)
Highest qualification	Medical residency	64 (44.4%)
	Master's Degree	38 (26.3%)
	Doctorate	39 (20.8%)
	Specialisation without medical residency	9 (6.2%)
	Post-doctorate	3 (2%)

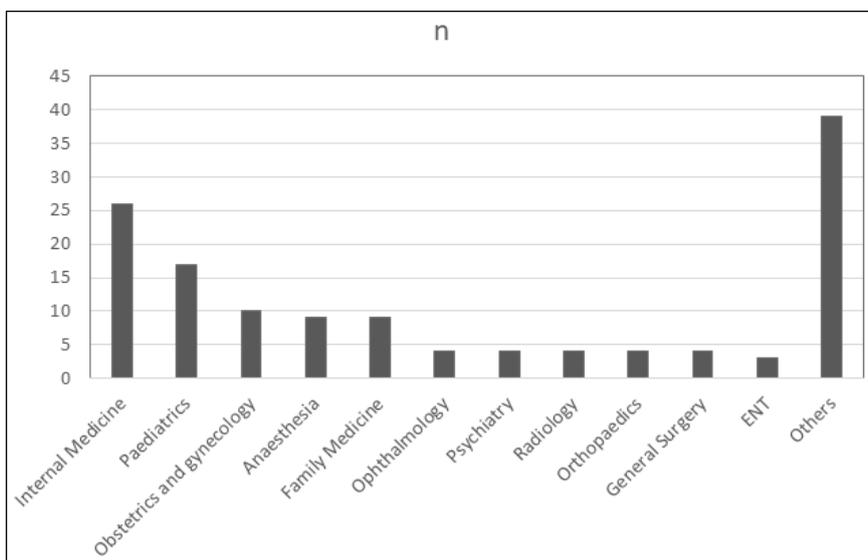
Source: Developed by the author.

Table 2. Survey of the working conditions of medical preceptors of a national postgraduate resident doctor training course in 2022.

Labour aspects	Categories	n (%)
Dedicated time per week	Less than 10 hours	36 (25%)
	10 hours or more	108 (75%)
Remuneration	Less than one minimum wage	31 (21.5%)
	Minimum wage	6 (4.1%)
	More than one minimum wage	19 (13.1%)
Cumulative role of assistant doctor and preceptor in the same working hours	Yes, with a preceptorship workload greater than or equal to 50%	88 (61.1%)
	Yes, with a preceptorship workload less than 50%	79 (54.8%)
	No	54 (37.5%)
Employment relation	Statutory	11 (7.6%)
	Employee subject to CLT	69 (47.9%)
	Volunteer	28 (19.4%)
	Independent Contractor	17 (11.8%)
	Outsourced	11 (7.6%)
	Others	6 (4.1%)

Source: Developed by the author.

Graph 1. Areas of specialisation for medical preceptors in a national postgraduate resident doctor training course in 2022.



Source: Developed by the author.

Of the total, 83.3% (n=120) of the institutions where the preceptors work are of an “exclusively public” character. In addition, 78.4% (n=113) of those interviewed said that there was no evaluation of their performance at their place of preceptorship.

DISCUSSION

The study included 144 interviewees who work as medical residency preceptors in 20 different states, as well as the Federal District. The region with the highest number of participants was the Southeast (n=69), representing 47.9% of the population

studied, followed by the Northeast (n=32), South (n=14), Federal District (n=13), Midwest (n=8) and North (n=8). This incidence is probably related to the higher number of doctors working in the Southeast, as shown in the Brazilian Medical Association's document "Medical Demography in Brazil 2023"⁶.

The prevalent age group was 40-49 years (65.9%), revealing a "mature" population of preceptors, a result similar to those presented by Wuillaume and Batista in their research, in which 74% of preceptors were aged between 30 and 49, and by Botti in his doctoral thesis, where 58% cent of preceptors were aged up to 49 years old^{7,8}.

With regard to gender, the majority (70.8%) were female. Souza showed a predominance of females (60%) in her research⁹ and also brought to light the discussion initiated by Giroto on the phenomenon of feminisation in both teaching and undergraduate courses in Brazil and worldwide¹⁰.

As for the highest academic qualification, to work as a preceptor one is required to hold a specialisation degree recognised by the CNRM, as described in CNRM resolution No. 16, of 30 September 2022². In our study, the most prevalent highest academic qualification was a medical residency certificate (44.4%) (TABLE 1) These findings were similar to those of Wuillaume and Batista⁷. Thus, approximately half of the members have only the minimum requirement to work as a medical preceptor, raising the question of whether this is due to the lack of incentive, both financially and as an institutional requirement for further training. Moreover, it is an activity that is often secondary to medical activity, resulting in non-exclusive dedication and a lack of training in the area. For this reason, there is a need for incentives in this area, as it is often the doctors themselves who become preceptors without being trained for this role over time or being paid any additional. Of the participants in this study, 92.3% (n=133) held a medical residency certificate. Therefore, most of the people in this study are competent to work as preceptors in medical residencies and fulfil the requirements of the resolution. Botti identified in his study that 23% of preceptors held a master's degree and 27% had completed a doctorate⁸. In this study, we investigated the percentage of postgraduate qualifications among the preceptors who took part, with 26.3% (n=38) having a master's degree, 20.8% (n=30) having a doctorate and 2% (n=3) having a post-doctorate.

With regard to the areas of specialisation of the survey participants, 19.5% (n=26) completed their residency in internal medicine; 12.7% (n=17) in paediatrics; 7.5% (n=10) in gynaecology-obstetrics, 6.7% (n=9) in anaesthesia and family medicine, 3% (n=4) in ophthalmology, psychiatry, radiology, orthopaedics and general surgery. Only 2.2% (n=3) completed their residency in ENT and 29.3% (n=39) in other

specialities (GRAPH 1). It is worth noting that 95.6% (n=138) of the interviewees work as preceptors in the area in which they specialised, 20.8% (n=30) have been preceptors for more than 10 years and 29.8% (n=43) for more than 15 years (TABLE 1). This data shows the prevalence of basic clinics, as well as adequate medical training to act as preceptors.

On the other hand, in the study by Leite and her collaborators, describing the sociodemographic profile of Family and Community Medicine residents in Brazil, it was observed that more than half of the supervisors and preceptors had been in the position for less than 3 years. According to the researchers, this shows the considerable turnover in these roles, which may reflect the lack of appreciation and support for these professionals in this area¹¹. The above reality reinforces the importance of qualifying and retaining preceptors, guaranteeing ongoing training. According to the literature, the factors that contribute to quitting the role of preceptor are the precarious conditions of health services and the lack of time set aside for planning teaching activities during working hours⁴.

It is known that a preceptor with excellent technical performance does not guarantee that they have the teaching skills needed to teach their students how to carry out their duties in practice. With regard to preparation for teaching, several studies have assessed the percentage of preceptors with pedagogical training in different regions of Brazil. Botti observed that this rate was only 50%⁸. Carvalho, whose study had a sample of 200 preceptors, revealed that 81% of the participants in the study said they did not feel qualified to perform the role of preceptor¹². This data is relevant as it allows us to reflect on the need and desire of preceptors to take training courses in the area. According to Souza, of the 60 preceptors who took part in her research, 80% (n=48) reported not having received teacher training⁹. Wuillaume and Batista analysed the profile of 90 preceptors and found that 50% (n= 45) had no specific preparation for teaching in medical residency⁷.

Medical residency preceptorship specialisation courses provide pedagogical training for the medical professionals who assist residents, improving the quality of teaching. In our survey, 76% (n=110) of the participants reported not holding a certificate in other specialised courses in preceptorship for medical residency (TABLE 1), bearing in mind that they were students on a course in this area at the time of the survey. In the area of Family Medicine, however, the European Academy of Teachers in General Practice (EURACT), made up of preceptors in the speciality who work in in-service teaching, recommends that the preceptor has proof of training in the speciality and completes a teaching training course¹¹.

Of the participants in this study, 54% (n=79) work as caregivers and preceptors at the same time, with a

preceptorship workload of 50% or more. Work overload can be detrimental to teaching. With regard to employment, 47.9% (n=69) have a statutory employment contract and 61.1% (n=88) do not receive any remuneration inherent to the role of preceptor or a bonus for working as a medical preceptor (TABLE 2). In Souza's study, 93.3% of the doctors interviewed said that they did not receive any remuneration for their preceptor work⁹. In Carvalho's research, which aimed to verify the existence of remuneration for doctors working in the Medical Residency Programme (PRM) in Pernambuco, the author concluded that remuneration is an irregular occurrence¹³. Some health institutions offer bonuses and others no form of payment at all. According to Lima, there is no specific legislation guaranteeing a unified, nationwide remuneration for medical residency preceptors¹⁴. The study thus provides data that could contribute to drawing up public policies aimed at guaranteeing labour rights with specific working hours and a wage floor for medical residency preceptors.

Of those interviewed, 64.5% (n=93) were satisfied with being preceptors most of the time, while 30.5% (n=44) were totally satisfied. This reveals that the majority of interviewees have a beneficial relationship with the medical preceptorship. No Brazilian literature was found on physician satisfaction with preceptorship, revealing a need for studies in this area. It can be seen that 83.3% (n=120) of the preceptors taking part in the study work in exclusively public institutions and they reported that there was no performance evaluation of the preceptor role in 78.4% (n=113) of the health services in which they work. This information is concerning, because failing to assess these preceptors can facilitate the maintenance of old habits and does not encourage the preceptors to seek to refresh and update their knowledge and improve, especially in relation to teaching.

Although our research has limitations because it was carried out with preceptors who are seeking professional development, the sample is small in relation to the number of the preceptors working in Brazil. The research was pioneering in its assessment of labour rights and satisfaction of Brazilian doctors who are medical residency preceptors.

CONCLUSIONS

The preceptor doctors who took part in this research are predominantly middle-aged adults, most of them female. They are experienced and qualified to carry out the role of preceptor, although a significant number of these professionals do not have pedagogical training in preceptorship, demonstrating an urgent need for training courses in this area. Most of the participants do not receive any specific remuneration for their position and also work as an assistant doctor at the same time as a preceptor. This highlights the importance of labour regulation in this profession.

This study was one of the first to assess the labour relations of Brazilian medical preceptors. The data obtained can contribute to the implementation of job and career plans, specific working hours for preceptorship, protected study hours, a wage floor, and the rights and duties of these professionals. This study also aims to update the profile of Brazilian medical residency preceptors who are taking a specialisation course, describing their main sociodemographic and educational characteristics. The information available here could contribute to drawing up egalitarian public policies, not only at a regional, but also federal, level. These projects should be aimed at guaranteeing improvements in working conditions, technical and pedagogical training for preceptors and, consequently, better quality of care for medical residents.

CONTRIBUTION OF THE AUTHORS

Márcia de Melo Rodrigues contributed to the conception, data collection and writing of the article. Sandra Mara Witkowski contributed to the conception, development, data collection, writing, revision and supervision of the article. Luciana dos Santos Celia Fossari contributed to the development, data collection and writing of the article. Ana Alice Broering Eller and Henrique De Rocco Echeverria contributed to the data analysis, and preparation and submission of the results. Vitor Hugo Lima Barreto helped in the supervision of the article.

CONFLICT OF INTEREST

We declare no conflict of interest.

FUNDING

We declare that there is no funding.

DECLARATION OF DATA AVAILABILITY

Research data is available in the body of the document

REFERENCES

1. Rodrigues CDS, Rocha CMF, Vasconcelos ACCP, Machado MFAS, Leitão IMTA. Formação para a preceptoría: necessidades, desafios e experiências no contexto internacional. *Saberes Plurais: Educ Saúde*. 2022;6(1):99-116.
2. Brasil. Resolução CNRM no 16, de 30 de setembro de 2022. Dispõe sobre estrutura, organização e funcionamento das Comissões de Residência Médica (COREMEs) nas instituições de saúde que oferecem os Programas de Residência Médica (PRMs) e dá outras providências. Brasília, DF: Ministério da Educação, Secretaria de Educação Superior; 2022 [acesso em 6 jul 2024]. Disponível em: https://www.gov.br/mec/pt-br/residencia-medica/Resolucao_n__16Coreme.pdf.
3. Tempiski P, Martins MA. Modelos teóricos do processo ensino-aprendizagem aplicados às técnicas de simulação. In: Scalabrini NA, Fonseca AS, Brandão CFS, organizadores. *Simulação realística e habilidades na saúde*. São Paulo: Atheneu; 2017. p. 1-10.
4. De Martini GDA, Esteves LSF, Viana LO, Oliveira VC. Capacitação de preceptores dos programas de residência em saúde no Brasil: uma revisão integrativa da literatura. *SciELO Preprints*; 2024 [acesso em 31 jan 2025]. Disponível em: <https://preprints.scielo.org/index.php/scielo/preprint/view/10196>.

5. Santos Júnior CJ, Scheffer M, Borges FS, Matijasevich A. Expansão de vagas e qualidade dos cursos de Medicina no Brasil: "Em que pé estamos?". *Rev Bras Educ Med.* 2021;45:e058.
6. Associação Médica Brasileira. Demografia médica no Brasil 2023. São Paulo: AMB; 2023 [acesso em 5 jul 2024]. Disponível em: https://amb.org.br/wp-content/uploads/2023/02/DemografiaMedica2023_8fev-1.pdf.
7. Wuillaume SM, Batista NA. O preceptor na residência médica em pediatria: principais atributos. *J Pediatr (Rio J).* 2000;76(5):333-8.
8. Botti SHO, Rego STA. Preceptor, supervisor, tutor e mentor: quais são seus papéis? *Rev Bras Educ Med.* 2008;32:363-73.
9. Souza AAB. Perfil pedagógico da preceptoría na Residência Médica em Anestesiologia da cidade de Manaus [dissertação]. Manaus: Universidade Federal do Amazonas; 2018. 87 f.
10. Giroto LC. Preceptores do Sistema Único de Saúde: como percebem seu papel em processos educacionais na saúde [dissertação de mestrado]. São Paulo: Universidade de São Paulo; 2016.
11. Leite APT, Mai S, Paulitsch A, Oliveira MM. Profile and migration of members of residency programs in family medicine. *Rev Saude Publica.* 2022;56:21.
12. Carvalho F, Melo A. Preceptores de residência médica: perfil epidemiológico e capacitação pedagógica. *Rev Bras Educ Med.* 2020;44:e159.
13. Carvalho CER. Remuneração do preceptor médico: sua existência e oficialidade [trabalho de conclusão de curso]. São Paulo: Hospital Alemão Oswaldo Cruz; 2023.
14. Lima, CM, Siqueira CRD, Almeida FAS, Ferreira GEB, Amaral JLA, Nobre NM, et al. Valorização da preceptoría de residência médica na região Amazônica. *Cadernos da Associação Brasileira de Educação Médica.* 2013;9:69-75.



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.