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REGISTRARS

Mastering your Fellowship

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Abstract

The series, "Mastering your Fellowship", provides examples of the question format encountered in the written examination, Part A of the FCFP(SA) examination. The series aims to help Family Medicine registrars prepare for this examination. Model answers are available online.

Keywords: FCFP(SA) examination, Family Medicine registrars

Introduction

This section in the *South African Family Practice* journal is aimed at helping registrars prepare for the FCFP (SA) Part A examination (Fellowship of the College of Family Physicians) and will provide examples of the question formats encountered in the written examination: Multiple Choice Question (MCQ) and/or Extended Matching Question (EMQ), Modified Essay Question (MEQ) and Critical Reading paper (evidence-based medicine). Each of these question types is presented according to a theme. The MCQs will be based on the ten clinical domains of family medicine, the MEQs will be aligned with the five national unit standards and the critical reading section will include evidence-based medicine and primary care research methods. We suggest that you attempt answering the questions (by yourself or with peers/tutors), before finding the model answers online: http://www.safpj.co.za/.

Please visit the Colleges of Medicine website for guidelines on the Fellowship examination: http://www.collegemedsa.ac.za/view_exam.aspx?examid=102

We are keen to hear about how this series is assisting registrars and their supervisors in preparing for the FCFP (SA) examination. Please email us your feedback and suggestions.

1. MCQ (single best answer question) Theme: Mental Health, Legal and Ethics

While performing clinical duties over a weekend, a police officer brings in a driver whom he alleges has been driving under the influence of alcohol. The driver was arrested an hour and a half earlier and the police official produces the SAP 308A form and confirms that a docket has been opened. The driver states that he knows his rights and that you cannot take blood from him, if he does not consent to the test. The most appropriate next step is to:

a. Ask the police officer for a court interdict compelling you to do the test.

b. Perform the test against the driver's wishes.

c. Refer the driver to his own doctor.

d. Refer the driver and police official to a dedicated forensic service.

e. Respect the driver's autonomy and do not perform the test.

2. SAQ (short answer question): the family physician's role as leader of clinical governance and driver of capacity building within the team

This question was used in the August 2016 written paper.

You are the Family Physician at a rural district hospital. One Friday you received a letter from the orthopaedic surgeon informing you that he had had to do a below knee amputation on a patient referred from your hospital. He expressed disappointment at the standard of orthopaedic care provided and volunteered to come to the hospital to conduct a continuing professional development (CPD) meeting on compartment syndrome as this had not been recognised or treated in this patient.

You pull out the notes (see Figure 1) to review the management of the patient.

2.1 What comments can you make about the quality of note keeping on this patient? (4 marks)

2.2 What questions does the note keeping raise about the management of this patient? (2 marks)

2.3 How would you respond to the regional specialist? (4 marks)

2.4 What could you do at your hospital to improve the quality of orthopaedic care (other than accepting the specialist's offer of a CPD meeting)? (6 marks)

2.5 The family are thinking of suing the hospital and the doctor. The Chief Executive Officer (CEO) asks your professional opinion on the management of this patient and how she should respond to the family. What would your advice be on how she should respond to the family? (4 marks)

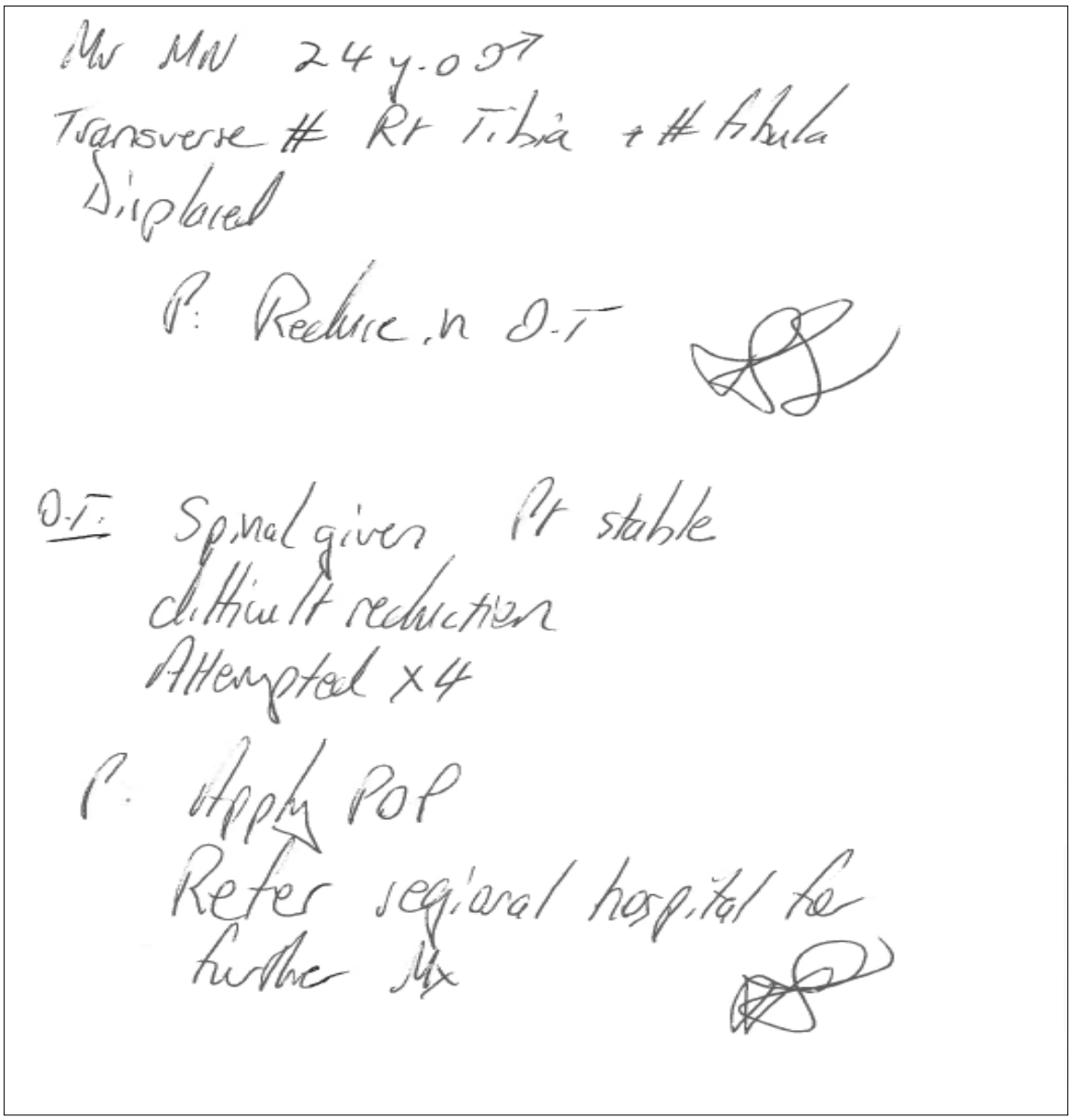

Figure 1: Patient notes (Question 2)

3. Critical appraisal of research

Please answer the questions related to the following article:

Naidoo SS, Schlebusch L. Sociodemographic characteristics of persons committing suicide in Durban, South Africa: 2006-2007. African Journal of Primary Health Care & Family Medicine. 2014 Jan;6(1):1-7.

This question appeared in the August 2016 written examination paper (total 40 marks).

3.1 Using the READER model for critical appraisal of this paper (Relevance, Education, Applicability, Discrimination, Evaluation, Reaction), outline your opinion of the paper (12 marks)

3.2 What research question did the authors attempt to answer in this study? (1 mark)

3.3 The study was conducted during 2010-2011, but the data analysed were from 2006-2007; what is the rationale given by the authors for choosing that specific period (2006-2007)? (1 mark)

3.4 Describe the study design of this research. (2 marks)

3.5 Briefly explain each of the following statistical concepts: mean, median, average, standard deviation and confidence interval. (2 marks each : 10 marks)

3.6 What were the two main findings of this research? (2 marks)

3.7 What previous finding was opposite/in contrast to this research finding? (1 mark)

3.8 Considering the introduction section in this paper, identify a sentence/phrase that best reflects the authors' starting point, from which the rationale for the research is further explained and/or elaborated on. (More than one correct answer is possible.) (2 marks)

3.9 Critically review this excerpt from the article below. Your answer will be evaluated not for being right or wrong, but for the strength of your critique. (4 marks)

Hanging emerged as the dominant method used by the majority of those committing suicide mainly because of its simplicity, proven effectiveness and easy access to structures within or adjacent to homes. There is therefore an urgent need for innovative employment strategies to help the unemployed, as well as greater awareness and education campaigns (amongst public health policy makers, low-cost housing developments and families) designed to restrict such easy access to any potential method by vulnerable individuals.

3.10 In what way would this research change your practice? (5 marks)

Model answers to questions

Question 1

Short answer:

b)

Long answer:

This is a common scenario that is frequently encountered in clinical practice across the country. Most of the dedicated forensic services in large metropolitan areas are very busy dealing with sexual assault so it is often expected that the "lesser" medico-legal problems be handled by medical practitioners employed by the public service. South Africa's mortality directly related to road traffic accidents is in the region of 39.4 per 100 000 which is 26% more than the regional average and twice the global average. Nearly half the drivers associated with these deaths on whom blood alcohol levels were drawn had levels above the legal limit. Violent deaths are the second leading cause of mortality in South Africa.

As healthcare professionals we need to contribute to the prevention of such deaths through community awareness programmes and also assist the authorities in the successful prosecution of drivers who operate a motor vehicle whilst intoxicated. The South African Road Traffic Act of 1996 states that:

"No person shall on a public road drive a vehicle or occupy the driver's seat of a motor vehicle the engine of which is running, while the concentration of alcohol in any specimen of blood taken from any part of his or her body is not less than 0,05 grams per 100 millilitres, or in the case of a professional driver referred to in section 32, not less than 0,02 grams per 100 millilitres."

The act further states that: "Any person detained for an alleged contravention of any provision of this section shall not during his or her detention consume any substance that contains alcohol of any nature, except on the instruction of or when administered by a medical practitioner and during his or her detention smoke until the specimen (blood sample) referred to in subsection (3) or (6) has been taken, as the case may be."

However, this still does not answer the question of informed consent and patient autonomy. This is covered in the Guidelines for Good Practice in the Health Care Professions. Section 37 of the Criminal Procedure Act authorises police officials only (and not traffic officers) to request a medical practitioner or nurse to draw a blood sample from people who are arrested for driving under the influence of liquor. The Act further stipulates that: "No person shall refuse that a specimen of blood, or a specimen of breath, be taken of him or her."

In terms of the law, you are thus compelled to draw the blood specimen within two hours of the alleged offence only if the police official confirms that an official charge docket has been opened and that a SAP 308A form accompanies the request. In terms of the options one may allow the drunk driver the option of choosing his own doctor or having his doctor present during the examination but this must not delay proceedings to greater than two hours. You may only take blood from an alleged drunk driver if the person has been arrested by the police and proof of such an arrest is supplied. If the impaired state of the driver is due to other suspected medical conditions such as head trauma, one should also record this on the form.

Further reading:

- Viljoen W. How to assess drunk driving and the responsibilities of the doctor. In: Mash B, Blitz J, editors. South African family practice manual. 3rd ed. Cape Town: Van Schaik, 2015; p. 552-555.
- Seedat M, Van Niekerk A, Jewkes R, Suffla S, Ratele K. Violence and injuries in South Africa: prioritising an agenda for prevention. Lancet. 2009;374(9694):1011-22.
- Health Professions Council of South Africa. Guidelines for Good Practice in the Health Care Professions. Ethical and Professional Rules of the Health Professions Council of South Africa as Promulgated in Government Gazette R717/2006 HPCSA Pretoria; 2007.
- South African Government. National Road Traffic Act. (Act No. 93 of 1996).
- South African Government. Criminal Procedure Act. (Act 51 of 1977).

Question 2

Model answer:

2.1 What comments can you make about the quality of note keeping of this patient? (4 marks)

The record keeping is poor: no date or time, no legible name, there is no history of the event that led to the fracture, there is no basic examination (pulse rate, blood pressure, colour, examination of the limb, peripheral pulses, loss of sensation, deformity, whether the fracture is open or closed, etc.), no evidence of discussion of the management with the patient, no details of analgesia or any other medication, no detail of the anaesthetic given, no evidence of circulation check post reduction and no instructions about circulation check and monitoring, and no notes about the ongoing care plan (referral and time lines for referral).

2.2 What questions does the note keeping raise about the management of this patient? (2 marks)

It is difficult to assess the management because the notes are so poor. However, on the basis of what is written: no analgesia was given, no discussion with patient on management noted,

four unsuccessful reductions is probably excessive, no clear instructions about monitoring, and no indication about discussion with regional hospital except for mentioning referral.

2.3 How would you respond to the regional specialist? (4 marks)

Any four of these options will suffice:

- Thank him for his feedback and his willingness to be involved in CPD activities at your hospital.
- Acknowledge that the notes and quality of care was poor.
- Ask him to attend a morbidity meeting where the management of the patient may be discussed.
- Arrange the CPD meeting. Explore other teaching and training opportunities.
- Ask how communication could be improved so that this kind of thing does not recur in the future.

2.4 What could you do at your hospital to improve the quality of orthopaedic care (other than accepting the specialist's offer of a CPD meeting)? (6 marks)

- Report this as an adverse event to the adverse event committee at the hospital
- Review the case: describe what has happened (description), and investigate the reasons why the adverse event happened (explanation). Do a root cause analysis: was this due to lack of knowledge, lack of skills, poor insight, reckless behaviour, etc.? Make recommendations to address issues identified (remediation).
- Recommendations may include:
  - The importance of quality notes, comprehensive history and examination.
  - An audit of the orthopaedic care at the hospital and set up a programme to address any shortfalls identified.
  - Review the orthopaedic experience of your team and see what knowledge and skills gaps there are.
  - Set up teaching/training/support structures, such as a regular review of x-rays.
  - Morbidity and mortality review meetings to look at patient management.
  - Arrange a continuing medical education (CME) programme which focuses on common orthopaedic problems.
  - Arrange regular visits from the regional specialist to review patient management (outreach programme).
  - Arrange for senior support to be available.
  - Institute a disciplinary hearing against the doctor involved should you believe that he/she acted in a reckless manner.

2.5 The family are thinking of suing the hospital and the doctor. The CEO asks your professional opinion on the management of this patient and how she should respond to the family. What would your advice be on how she should respond to the family? (4 marks)

Advice to the CEO may include:

- Quality of the notes is poor.
- Quality of care is poor.
- Case is indefensible.
- Consider settling out of court.
- Consider disciplinary hearing against the doctor involved.

Advice on how to respond to the family:

- Apologize to the family.
- Acknowledge that the care provided was sub-standard.
- Assure the family that the issues are being addressed within the hospital (training programs, audit, disciplinary hearing, etc.).
- Acknowledge that the family has a right to redress.

Further reading:

- Mash R, Blitz J, Malan Z, Von Pressentin K. Leadership and governance: learning outcomes and competencies required of the family physician in the district health system. South African Family Practice 2016. Doi: 10.1080/20786190.2016.1148338. Available from URL: http://dx.doi.org/10.1080/20786190.2016.1148338
- South African National Department of Health. National Policy to manage Patient Safety Incidents in the Public Health Sector of South Africa. Pretoria: South African Department of Health Press; 2015. Available from URL: https://www.idealclinic.org.za/docs/Final%20Draft%20National%20Policy%20to%20manage%20Patient%20Safety%20Incidents%20in%20South%20Africa%2018%20Dec%202015.pdf
- Couper I. How to deal with a medical mistake. In: Mash B, Blitz J, editors. South African family practice manual. 3RD ed. Cape Town: Van Schaik, 2015; p. 572-573.

Question 3

Model answer:

3.1 Using the READER model for critical appraisal of this paper (Relevance, Education, Applicability, Discrimination, Evaluation, Reaction), outline your opinion of the paper (12 marks)

Guidance to answering the question (not part of model answer):

Does the student critically question (as the reader):

- Whether the article is relevant to primary care or family medicine? (relevance)
- Whether the article could change the reader's behaviour? (education)
- Whether the research could be done in or applied to the reader's own practice context? (applicability)
- Whether the findings are scientifically valid? (discrimination)
- Whether the paper should be considered seriously (evaluation). Summary evaluation of the paper using the READER score.
- What the reader should do with the paper? (reaction)
  Over 20: Classic paper that should make an immediate impact on practice; this article needs to be brought to a practice meeting and discussed.
  15-20: Average paper, keep a record if it was interesting or of particular relevance to you, perhaps keep a note of the

reference and abstract.
Under 15: Forget about it (NB: explanation of all ranges of score NOT required).

Two marks for demonstrating an understanding within each READER component (using critical appraisal).

Example of a model answer:

Relevance:

This article is relevant to the discipline of family medicine, as it reports on a complication of mental health problems, such as depression, which are common to primary care.

Education:

The study may provide new knowledge on factors associated with suicide although the factors identified are quite broad and not entirely new or surprising. Educational value probably limited.

Applicability:

This study examined mortuary records from a metropolitan city in the Kwa-Zulu Natal province. Risk factors obtained from a large study population may be difficult to apply to the risk for a specific patient in a specific consultation and situation. The study therefore has a limited application at the level of the individual patient in primary care.

Discrimination:

The authors described several limitations, such as being reliant on the limitations presented by the mortuary records as the data source. The reader should realise that this is a descriptive study, which bases its conclusions on an analysis of these mortuary records. The socio-economic complexities around each of the suicide victims will not be described as the researchers explained that it was not practical to evaluate additional data sources (such as medical records and interviews with family members). This study provides a snapshot of the so-called tip of the iceberg, as the full burden of suicidal behaviour is not described. The analysis of the available dataset, as presented in this article, does provide a useful understanding of the associative factors related to suicide in this sample, such as age groups, race and socio-economic status. The authors did not perform inferential statistics to understand how these findings may be generalised to the larger population.

Evaluation:

This article reports on a descriptive analysis of mortuary findings of suicides within an urban population. The limited educational impact, applicability to individual patient risk and the limitations of the data collected (only what was recorded on mortuary records) makes this an "average paper" in terms of its evaluation.

Reaction:

The article may help the reader to reflect on his/her current practice, such as screening for mental health problems in the teenage and young adult age groups, especially males who are experiencing employment difficulties. The usefulness score lies between 15 and 20, implying that it is something to be aware of but will not immediately change clinical practice.

3.2 What research question did the authors attempt to answer in this study? (1 mark)

Describe the socio-demographic of people committing suicide in Durban 2006-2011 and the trend of suicide. (1)

3.3 The study was conducted during 2010-2011, but data analysed were from 2006-2007; what is the rationale given by the authors for choosing that specific period (2006-2007)? (1 mark)

To ensure that only authentic suicide cases finalized via the inquest methodology employed in South Africa were included for the analysis in the study (page 2 last paragraph).

3.4 Describe the study design of this research. (2 marks)

Descriptive retrospective study using quantitative methodology (epidemiological study).

3.5 Briefly explain each of the following statistical concepts: mean, median, average, standard deviation and confidence interval. (2 marks each: 10 marks)

Mean: measure of central tendency, the arithmetic average if there was an equal distribution of values (interval and ratio data). It is affected by the presence of "outliers" (extreme values). It is calculated by adding all the values for a variable and dividing it by the number of cases. See Table 5, age descriptors of suicide victims, for difference in values between mean and median ages for the two time periods. This may be due to the outlying values within the sample.

Median: measure of central tendency, a mid-point of a range, which may be used for ordinal, as well as interval and ratio data. It is not affected by extreme values. Exactly half the values are above the median. It is calculated by placing values in the data in either ascending or descending rank order; the median lies in the middle of this range.

Average: in general language use, the average refers to the mean value (as a measure of central tendency). In statistics, however, the use of either mean or median is preferred, dependent on whether the data spread for the variable in question is distributed normally or not (use the mean for normally distributed data and the median for non-normally or non-parametric spread).

Standard deviation: this concept describes the spread of data around the central point; the greater the dispersion, the larger the standard deviation. This measure of dispersion can only be used with continuous data, and lends itself to further mathematical analysis via statistical software programmes.

Confidence interval: a confidence interval measures the probability that a population parameter will fall between two set values. The confidence interval can take any number of probabilities, with the most common being 95%. In Table 5, the 95% confidential interval for mean age is presented, which means that the authors are 95% confident that the true value of the mean age (the population parameter) lies within the confidence interval of 32.8–35.5 years for the year 2006.

3.6 What are the 2 main findings of this research? (2 marks)

The actual rate of suicide per racial group showed a gradient increase from 2006 to 2007 for all groups except for white people (increase in suicide rate according to racial group sub-group: black > Indian > mixed race > white).

3.7 What previous finding was opposite/in contrast to this research finding? (1 mark)

The documented suicide rate in the white sub-group of South African suicide victims was previously reported as higher compared to the black, Indian and mixed-race South African suicide victim sub-groups.

3.8 Considering the introduction section in this paper, identify a sentence/phrase that best reflects the authors' starting point, from which the rationale for the research is further explained and/or elaborated on. (More than one correct answer is possible) (2 marks)

The starting point or the rationale for carrying out this research is the evidence of an increase in suicides over the last decade.

Possible correct answers include:

Statements highlighting the increase in suicides globally (in first paragraph): a) Suicidal behaviour… has increased globally over the last decade, b) According to the World Health Organization (WHO), approximately 1.53 million people will die annually from suicide by 2020, compared with the 0.88 million suicides that occurred in 2002 (each 2 marks).

Statements highlighting the increase in suicides locally (in second paragraph): c) In South Africa, it was reported in 2008 that approximately 6500 suicides and 130 000 suicide attempts occurred annually. It is widely believed that these figures have since increased; d) Suicide rates have been increasing steadily in all population groups in the country over the last decade.

Statements highlighting a changing trend in suicides, with respect to a demographic, e.g. race, age group, region, or suicide method e.g. hanging, shooting (in second/third and fourth paragraphs) are poorer options as they are too specific (each 1 mark).

Statements that provide background to the study (fifth and sixth paragraphs) on a) information on Durban and b) the fact that this study is part of a larger study do not provide a starting point for the study rationale, and are not correct answers (0 marks).

3.9 Critically review this excerpt from the article below. Your answer will be evaluated not for being right or wrong, but for the strength of your critique. (4 marks)

> Hanging emerged as the dominant method used by the majority of those committing suicide mainly because of its simplicity, proven effectiveness and easy access to structures within or adjacent to homes. There is therefore an urgent need for innovative employment strategies to help the unemployed, as well as greater awareness and education campaigns (amongst public health policy makers, low-cost housing developments and families) designed to restrict such easy access to any potential method by vulnerable individuals.

The student will note the "ease" of hanging, owing to its simplicity, proven effectiveness and easy access to structures. This reality requires broad solutions to be found to reduce suicides generally, such as innovative employment strategies, awareness and education campaigns. The rationale for the "urgent need" to reduce suicides is not, however, linked to the specific fact that hanging is the dominant method. There are three reasons given for why hanging emerged as the dominant method of suicide. With the exception of needing designs that restrict access to structures, there is not a clear inference that the specifics related to hanging necessitate broad action on the areas of need, as described.

3.10 In what way would this research change your practice? (5 marks)

A subjective response, but one that demonstrates a reflection on the possible changes within the student's practice within the South African public health care system. Acceptable for the student to suggest how his/her practice might change, within other scenarios after graduation and so forth.

Further reading:

- Mash B, Ogunbanjo G. African Primary Care Research: Quantitative analysis and presentation of results. Afr J Prm Health Care Fam Med. 2014;6(1), Art. #646, 5 pages. http://dx.doi.org/10.4102/phcfm.v6i1.646
- Pather M. Continuing professional development. In Mash B (Ed) Handbook of Family Medicine (3rd ed). Cape Town: Oxford University Press, 2011: 406–429.
- Denscombe M. The good research guide: for small-scale social research projects. McGraw-Hill Education (UK); 2014 Aug 1.

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