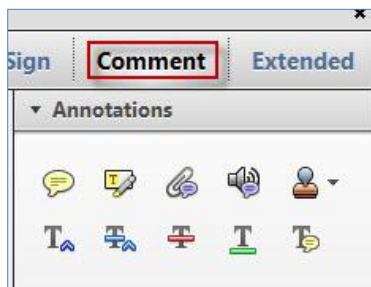


Authors Guidelines:

Electronic Proof Correction Using Acrobat Reader



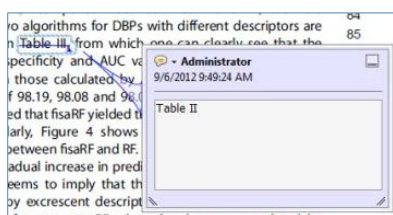
Required software to e-Annotate PDFs: Adobe Acrobat Professional or Adobe Reader (version 8.0 or above). (Note that this document uses screenshots from Adobe Reader X). The latest version of Acrobat Reader can be downloaded for free at: <http://get.adobe.com/reader/>

Once you have Acrobat Reader open on your computer, click on the Comment tab at the right of the toolbar:



1. Replacement Text Tool — For replacing text.

Strikes a line through text and opens up a replacement text box.



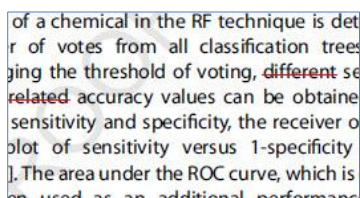
How to use it:

1. Highlight a word or sentence
2. Select "Replace Selected Text" from the Text Edits fly down button
3. Type replacement text in blue box



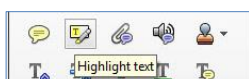
2. Cross-out Text Tool — For deleting text.

Strikes a red line through selected text.



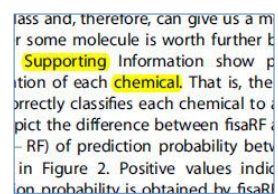
How to use it:

1. Highlight a word or sentence
2. Select "Cross Out Text for Deletion" from the Text Edits fly down button



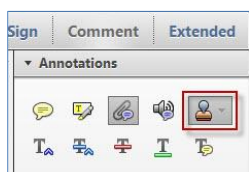
3. Highlight Tool — For highlighting a selection to be changed to bold or italic.

Highlights text in yellow and opens up a text box.



How to use it:

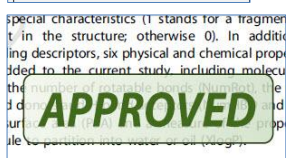
1. Highlight desired text
2. Select "Add Note To Selected Text" from the Text Edits fly down button
3. Type a note detailing required change in the yellow box



4. Approved Tool (Stamp) — for approving a proof if no corrections are required.

How to use it:

1. Click on the Stamp Tool in the toolbar
2. Select the Approved rubber stamp from the „standard business“ selection
3. Click on the text where you want to rubber stamp to appear (usually first page)



1. Context

Approximately 1.5 million symptomatic cases of hepatitis A virus (HAV) infection happen in the world each year (1). Hepatitis A virus was first isolated in 1973 (2). It is a small, nonenveloped RNA virus that belongs to Picornaviridae family (3) and causes 75% of all cases of hepatitis worldwide (4). Since then, investigations have been performed to clarify HAV structure (5), the process of getting infected, and to find an efficient way of preventing hepatitis A among populations (6-8). Replication of HAV occurs in liver; it is secreted to bile, and is highly found in stool, especially during the late incubation period and the first week of symptomatic phase of disease (9). This infection can be easily transmitted through fecal-oral route, by close contact with infected person, and contaminated food and water and even blood products (10). Prevalence of HAV infection is not the same in different parts of the world (varies between 15% and 100%), and depends on geographic area, sanitary levels and socioeconomic conditions (11-14). Meanwhile, a shifting epidemiological pattern from high to intermediate and low seropositivity has been shown in many countries, some of which are underdeveloped and developing countries (4, 7, 15-18). Although this change seems desirable, it can lead to a higher risk of outbreaks among adult population who have not been exposed to HAV in their life and are not immune against it (7, 19). Superimposing of HAV in patients with chronic liver disease during epidemics can end in many deaths (20-22). In addition, hepatitis A is often asymptomatic in childhood and its morbidity and fatality increase by age (7, 23, 24). To protect these nonimmune people, or at least, to evaluate if it is necessary to protect them, estimating HAV epidemiology in areas like EMRO countries which are known as HAV endemic regions seems necessary.

Actually, clarify of epidemiological pattern of HAV infection can be helpful in further planning to keep it under control and impede outbreaks. In this review, epidemiological investigations from this geographic zone, mostly those based on the accumulated data from 1980 to 2010, were studied to more clarify the HAV current magnitude in Eastern Mediterranean Regional **Organi-**

zation (EMRO) countries.

2. Evidence Acquisition

Potentially relevant studies were identified using an electronic search since 1980 up to 2010 in Medline, Embase, Scopus and ISI. The searches were performed using several predefined combinations of the following keywords and MESH terms or their equivalents without temporal limits: Hepatitis A,, HAV, Prevalence, Epidemiology, Outbreak, and EMRO. The additive search was performed by the names of all countries in EMRO area separately (Afghanistan, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, The United Arab Emirates, Yemen). Additionally, Persian-specific databases including SID, EMR Medex, websites of Iranian universities, Iran Medex and MagIran were searched using the aforementioned keywords. The final list of obtained titles and abstracts was reviewed by the two authors, and eligible studies were ascertained and their full texts were obtained. Furthermore, bibliographies of included studies were screened to find other relevant studies. Included manuscripts should have been studies published in full, and the final decision on their eligibility has been made by consensus.

3. Discussion

Two hundred and ninety nine potentially relevant studies were imported to our Endnote library. Through title and abstract screening by the two authors, 82 more relevant studies were selected and their full texts were obtained. Finally, 33 studies were enrolled in our review on the epidemiology of HAV in EMRO countries. Iran, Saudi Arabia, Egypt, Lebanon and Pakistan had 9, 7, 5, 3 and two studies respectively. One study was found for each of Afghanistan, Kuwait, Morocco, Palestine, Somalia, Syria and the United Arab of Emirates. Unfortunately, no relevant study was found for Tunisia, Yemen, Sudan, Qatar, Oman, Libya, Jordan, Iraq, Djibouti, and Bahrain. Prevalence data obtained from previous epidemiological studies in EMRO countries are summarized in Table 1.

Table 1. HAV Prevalence in Different EMRO Countries

Authors	Publication Year	Target Population	Studied Population, No.	Age, y	HAV Prevalence, %
Afghanistan					
Carmoi et al. (25)	2009	Residents of the Kabul district who visited the French military field hospital	102	5-65	99
Egypt					
El-Karakasy et al. (26)	2008	Children with chronic liver diseases	172	< 5	62.1
Salama et al. (27)	2007	Children of different socioeconomic status (SES) in Cairo: Low SES	426	3-18	90
		High SES	142	3-18	50