

WG 2 (Preventive Medicine and Healthcare Policies)

The Use of Artificial Intelligence to Support Medical Fitness Assessment

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Background:

The past year and a half have seen the highest number on record of reservists for service in the IDF. In the recruitment process of these reservists, vast amounts of medical documentation had to be examined to assess the fitness for service in these cases. The integration of artificial intelligence (AI) into healthcare systems has shown significant potential in streamlining administrative processes, particularly in the summarization of medical documentation.

Purpose:

This study explores the implementation of AI-driven natural language processing (NLP) tools to automate the summarization of clinical notes, discharge summaries, and other medical records in the reservist population of the IDF.

Methods:

Implementation worked by leveraging advanced machine learning algorithms, including Optical Character Recognition (OCR), Document Intelligence, Generative Pre-trained Transformers (GPT), and a brand-new document splicing tool invented by the IDF. Using these tools, the AI system was trained to extract key information, condense lengthy documents, and generate concise, accurate summaries while preserving critical clinical context.

Conclusions:

A pilot implementation is being conducted over six months, involving a large amount of reservist candidates with medical documents across multiple departments. During this pilot, a study will be conducted, and the AI-generated summaries will be evaluated by a panel of clinicians for accuracy, relevance, and time savings.

Future research should focus on scaling the technology, addressing ethical considerations, and integrating AI summaries into Electronic Health Record (EHR) systems for seamless adoption across healthcare organizations.

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Integration of People Coping with Inflammatory Bowel Disease in Active Military Service

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Background:

The Israeli Defense Forces (IDF) allows citizens with Inflammatory Bowel Disease (IBD) among other chronic medical conditions to volunteer for military service through a special medical volunteer program. No comprehensive study has examined the impact of military service on disease progression or military performance.

Purpose:

To evaluate the association between military service and IBD among medical volunteers, focusing on service completion rates, professional functioning and disease progression.

Methods:

This retrospective study examined 734 volunteer soldiers with IBD who served in the IDF between 2019-2024. Data was collected from computerized medical records and included demographic, occupational and medical information.

Results:

Of the subjects, sixty percents (n=437) were males and 39% (n=289) served in combat units in non-combat roles. 2.5% (n=18) required hospitalization during their service, while 20% (n=148) took more than 30 sick days. Regarding occupational stability, 93% (n=683) maintained their role or transitioned to equivalent or better positions, while only 7% (n=51) required reassignment to less demanding positions. Early discharge occurred in 4.2% (n=31) of cases, while approximately 8.4% (n=62) extended their service.

Logistic regression revealed that male soldiers and soldiers with ≤ 30 sick days had significantly higher service completion rates (OR=3.55, $p < 0.05$; OR=3.38, $p < 0.05$ respectively).

Conclusions:

The findings suggest that in the current sample, no significant negative association was found between military service and disease control, nor was there a negative impact of the disease on military service completion among volunteers.

Given these outcomes, consideration should be given to including IBD patients in remission within the standard medical classification system with a non-combat profile, rather than through the volunteer program.