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An Online Toolkit to Improve Primary Care Nurse Practitioner Awareness of Non-Alcoholic Fatty Liver Disease

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Since its recognition as a new chronic disease 40 years ago, the prevalence of Non-alcoholic Fatty Liver Disease (NAFLD) has reached epidemic proportions. The most severe type, non-alcoholic steatohepatitis (NASH), is predicted to become the leading cause of liver transplant over the next two decades. **Background.** Because the rising prevalence of NAFLD outnumbers available specialists, primary care providers play a prominent role in the diagnosis and management of the disease. However, primary care providers experience significant knowledge gaps related to NAFLD. These gaps can result in delayed diagnosis and access to intervention that could improve outcomes. Though these knowledge gaps are often generalized to all primary care providers, primary care nurse practitioners are underrepresented in current studies. One solution to address knowledge gaps is provider toolkits. Toolkits are defined by the Agency for Healthcare Research and Quality (AHRQ) as a collection of resources that support users in evidence-based practice. Toolkits have been used in Chronic Kidney Disease, pediatric obesity, depression, and other conditions commonly encountered in primary care. This project's aim was to develop the NAFLD toolkit, an online provider toolkit to improve awareness, identification, and management of adult NAFLD in primary care. The toolkit (<https://sites.google.com/view/naflidtoolkit>) was developed based on guidelines from the Agency for Healthcare Research and Quality (AHRQ), and includes resources on NAFLD epidemiology, pathophysiology, diagnosis, management, and patient education. The Knowledge to Action framework guided the process of integrating the evidence from literature into clinical practice during toolkit design. The framework will continue to guide the toolkit launch and reassessment. While the toolkit was designed to be applicable to all primary care providers, data collection focused on primary care NPs due to the aforementioned underrepresentation in current studies. **Methods.** An extensive literature synthesis and clinical rotation provided the content to develop the toolkit. Experts in hepatology, mental health, and dietetics were consulted to review respective parts of the toolkit for accuracy. The toolkit was pilot tested with five primary care nurse practitioners who also evaluated its compliance with an AHRQ toolkit development checklist. Feedback and responses resulted in revisions and improvements to the toolkit. Next, a convenience sample of primary care NPs were recruited to use the toolkit from the Association of Missouri Nurse Practitioners. Inclusion criteria included having worked as a primary care NP within the last five years. The NAFLD Survey for General Practitioners, validated for use with primary care providers in Australia, was modified for applicability in the United States and used to evaluate NP knowledge and awareness of NAFLD. The survey assesses the knowledge level of primary care providers regarding NAFLD diagnosis and management. The survey also includes an item for qualitative comments. Our project added a likert-scale question to the survey to assess if participants felt they had adequate knowledge to manage patients with NAFLD. The same survey was administered pre and post toolkit exposure. **Results.** Two weeks of the six week study period have been completed. Pre-survey results demonstrate underestimation of NAFLD presence and unfamiliarity with diagnostic options. Mean scores improved on the post-survey after the toolkit was used. Qualitative responses from participants to date (n=5) note that the toolkit has been helpful to clinical practice and created an awareness of and solution to unrealized knowledge gaps. All participants show improvement in the likert-scale question assessing knowledge adequacy. Upon completion of the data collection period, full evaluation for statistical significance will be performed on pre and post mean survey scores and results will be available at the presentation. **Conclusion.** Primary care NPs experience similar knowledge gaps regarding NAFLD as those demonstrated by their physician colleagues. The NAFLD toolkit improves NP knowledge and awareness of NAFLD and is a useful strategy for translating evidence into practice. Similar toolkits can be created to support evidence-based practice for other chronic diseases in primary care. Future study should be aimed at assessing this toolkit's ability to improve patient outcomes and its effectiveness nationwide and with non-NP PC providers.

Title:

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Keywords:

Knowledge Translation, NAFLD and Toolkit

References:

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Abstract Summary:

Using guidelines from the Agency for Healthcare Research and Quality, an evidence- based practice toolkit to help primary care nurse practitioners (NP) diagnose and manage Non alcoholic fatty liver disease (NAFLD) was designed. Use of the toolkit improved knowledge and awareness regarding this prevalent chronic disease.

Content Outline:

Problem (Younossi et al., 2016; Zeos & Renner, 2015)

1. NAFLD prevalence is rising and it will become the leading reason for liver transplant.

2. There are not enough specialists (hepatologists/gastroenterologists) to see all patients with NAFLD, therefore it requires diagnosis and management in primary care.
3. NAFLD is underrecognized by primary care providers.
4. NPs are underrepresented in studies of primary care providers' awareness of NAFLD

NAFLD Overview (Chalasan et al., 2017)

1. NASH versus NAFL subsets
2. Liver manifestation of metabolic syndrome
3. Diagnosis with NAFLD-FS
4. Management is diet and lifestyle changes

Intervention: The Adult NAFLD toolkit for primary care providers

1. Definition of a toolkit and guidelines for development (Agency for Healthcare Research and Quality [AHRQ], 2016, para 1)
2. Toolkits success demonstrated in a wide range of primary care problems (Barac et al., 2016)

Framework

1. Knowledge to Action Framework (Graham et al., 2006)

Methods

1. Toolkit and survey reviewed for content validity and usability
2. Convenience sample from Nurse Practitioners in Missouri working in primary care
3. NAFLD Survey for General Practitioners (Patel et al., 2017) adapted for use
 1. Measured Pre and post use of toolkit
 2. Likert scale question added asking if participants had the needed knowledge to diagnose and manage NAFLD

Results

1. Data collection currently in process; Preliminary feedback positive
2. Participants felt better equipped to diagnose and manage NAFLD after reviewing the toolkit

Conclusion (anticipated)

1. The Adult NAFLD toolkit improves knowledge and awareness of primary care nurse practitioners

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