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Title

Exploring the educational needs and preferences of physicians in pharmacogenomics in primary care practice.

Priority 1 (Research Category)

Education and training

Presenters

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Abstract

Context

Ten percent of patients using prescription drugs experience adverse drug events (ADE). A proportion of these ADEs can be explained by a difference in enzyme activity between individuals. A higher concentration of medication in the body can lead to more side effects such as headaches, dizziness, or tremors. Intra-individual variation in genetic composition is one of the key contributing factors determining enzyme activity. Pharmacogenomics (PGx) describes this variability in drug response. PGx is an expanding research field, with a quickly growing body of evidence. However, current use of PGx remains limited. One proposed reason is the lack of knowledge about PGx among clinicians slowing down the potential for clinical implementation, showing the main barrier to implementation is lack of healthcare professionals' education.

Objective

The aim of this study was to explore the role of PGx in primary care (i.e. family medicine) and the need for education in this area.

Study design and Analysis 26 participants took part in two types of focus groups: mono-disciplinary groups (family medicine clinicians) and multidisciplinary groups composed of a diverse set of experts in family medicine, pharmacists, educationalists, PGx experts, patient advocacy group representatives. Focus group sessions were audio-taped, transcribed verbatim and analyzed using content analysis. Recurrent themes were identified.

Setting

Family medicine at Mayo Clinic in Rochester, MN, USA

Results

Four themes emerged regarding the PGx educational needs and the role in primary care: (1) need for PGx competencies, (2) insight into roles and responsibilities of PGx services, (3) optimization of PGx workflow through artificial intelligence integrated in the electronic health record, (4) ethical dilemmas and psychological effects related to PGx. These themes reflect a shift in the role of PGx in primary care with implications for education.

Conclusions

The role and responsibilities of Family Medicine providers about PGx require further study. Our results support previous survey study outcomes and give deeper understanding of the limited use of PGx. The results of this study show clinicians are uncomfortable with the use of PGx due their knowledge barriers, when and how to order a test, identify medication with gene drug interactions, interpretation of test results and where to find information or guidelines. Fitting education would help primary care clinicians to become more competent.