

**Results** A total of 422 parents participated in this study. 19% of parents reported that their children consumed at least four servings of F&V per day. No statistically significant difference was observed in parental attitudes across children's vegetable consumption levels. A significant difference ( $p = 0.004$ ) in the importance of fruit in children's diets across consumption levels was observed. 91% of parents whose children consumed F&V less than daily agreed with the statement that 'It is important to me that my child eats fruit', compared to 100% of parents whose children consumed at least four servings of F&V per day.

**Conclusion** In this study, most primary school children did not eat the recommended daily servings of F&V. Although one difference was observed in the importance of fruit in children's diets across consumption levels, parental attitudes towards vegetables did not influence children's intake. Therefore, future analysis should consider other parental factors that may influence child F&V intake levels, including food availability and parental consumption.

## Health systems

### 12 DEVELOPMENT OF A SCREENING ETOOL FOR PRE-DIABETES AMONG KAZAKH POPULATION AND ITS APPLICATIONS: PERSPECTIVES FROM MEDICAL DOCTORS

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**Background** Diabetes is identified as one of the most important healthcare challenges for many countries. The high prevalence of prediabetes with its long asymptomatic phase of the disease are strong arguments for screening. Currently, such tool is not routinely used in the clinical settings in Kazakhstan.

**Objectives** We developed a screening tool for prediabetes among Kazakh population. This screening tool includes family history, dietary and other lifestyle risk factors. The aim of this pilot project is to gather feedback and comments from doctors about the application of this new tool.

**Methods** Based on qualitative methods, semi-structured interviews were conducted with 9 doctors. Participants were purposively selected based on their roles and clinical experience in diabetes management.

**Results** All the respondents agreed that using screening tool at the early stage will be a useful healthcare intervention strategies. Cost-effectiveness was one of reasons suggested for using screening tools. Participants discussed each part of the screening tool which was included in the questionnaire, assessed their importance and applicability. Some of the health professionals in our study noted some barriers to developmental tool in general, which included difficulties with interpretation and self-management.

**Conclusions** Based on the findings, the new tool will be potentially useful as a diagnostic tool at the early stage, allowing individuals with undiagnosed diabetes to seek timely medical care.

## Health systems; food systems

### 13 AI APPLICATIONS FOR DIETARY INTERVENTIONS: PERSPECTIVES FROM EAST & CENTRAL ASIA

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**Background** Assessment of dietary intakes is notoriously laborious and generates information that requires a lot of effort in coding and subsequent analysis. Furthermore, keeping track of the everyday diet via taking photos of the meals might enhance the accuracy of the dietary assessment and reduce reporting and recall biases. Currently, Computer Vision (CV), which is a subfield of Artificial Intelligence (AI) is being utilized for various applications in food recognition such as *smart* restaurants, supermarkets, and nutritional assessment to increase social awareness of a healthy lifestyle. Thus, information mined from *food images using CV could have considerable potential in dietary interventions*.

**Objectives** The overarching project aims to apply CV techniques to identify main dietary factors in association with corresponding cardio-metabolic factors in Kazakhstan. In order to achieve this, we have to first develop a model for detecting and identifying food items unique to local Central Asian cuisine. We will then apply transfer learning from pre-trained food classification models to our custom dataset. Further, we will link the nutritional content to the food classes, such that the model will provide the assessment based on the longitudinal dietary patterns.

**Methods** A Telegram Bot was created to collect food images unique to Central Asia as well as other dietary and lifestyle factors. For each food class, approximately 1,000 images are to be collected and annotated. In the case of rare food items, data augmentation techniques will be applied.

**Results** To date, we have collected images for about 8 classes of foods and 2 classes of beverages unique to Kazakhstan. More than 4,000 images have been collected and annotated. While the rest of the classes are being pre-processed, we are now performing parametric experiments with EfficientNet and ResNet deep learning models. Further details will be provided during the presentation.

**Conclusions** The creation of the Central Asia food datasets will help to better explore and examine the dietary patterns which will allow researchers to conduct both nutrition and dietary surveillance in a more effective manner.

## Practical implementation

### 14 A BASIC NUTRITION CURRICULUM FOR ALL: CASE STUDY OF RURAL WOMEN, BASSI PATHANA, PUNJAB (INDIA)

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**Background** Good health and wellbeing is closely associated with nutritional food intake and healthy eating habits; this