ABSTRACT
Designing mHealth applications with and for young people is a desirable – yet challenging – aim. The potential benefits include gathering deep understanding of the needs and wants of this population. Yet accessing and engaging young people with mental health condition raises numerous ethical and practical challenges. This paper discusses the importance and the challenges of engaging young people in conversations around the sensitive topic of mental health.

Author Keywords
mHealth; Young People; Mental Health; Participatory Design.

INTRODUCTION
There is a growing body of evidence, demonstrating mHealth’s potential to offer ubiquitous, self-monitoring and therapeutic solution [1]. While mHealth aims to create and support a move to more rational models of care – where people are supported in understanding about and taking care of their own health – challenges exist with respect to privacy, trust, stigma and feedback delivery to the end user.

Young People and Mental Health
Mental health is an umbrella term that covers a wide range of conditions including but not limited to: anxiety, depression, substance misuse, self-harm, eating disorder, bipolar disorder and psychosis. It is estimated that 75% of mental illnesses start in childhood before reaching the age of 18 [16]. Stigma associated with mental health often prevent young people from reaching out for help and support. It is thought that up to 40% of young people experiencing self-harm do not seek help due to stigma, and fear of negative reactions [17]. Therefore traditional face-to-face interventions lack capacity to reach young people. Studies identify preference towards online support [6, 18], due to the anonymity and acceptance it affords [15]. Young people access education, social interactions and entertainment primarily via their smartphones [9], thus making it a useful device to support access to resources; promote help-seeking and self-management behaviors.

mHealth in Mental Health
In recent years, sensing capabilities offered by mHealth have increased significantly. Sensing solutions have shown to be strong indicators of change in mental health status. Examples include using location and mobility [5]; Speech characteristics [11]; physical activity [3]; phone use patterns [2]; and social interaction [4] to detect changes in mood in various mental health conditions. While it is evident that these sensing solutions are effective in detecting mental health state, the challenge sits predominantly with the approach used to provide feedback to influence mental state. For an end user dealing with a mental health condition, receiving prompts about changes in their mood can have implications. While people are different in their preferences on how to be informed about their mood and wellbeing, it is important to better understand how to design this feedback infrastructure so that it is not triggering for someone dealing with a mental health condition.

Engaging Young People in Design
Engaging young people in participatory design is desirable yet challenging. Within the field of HCI, young people remain a relatively under-represented group [10], particularly in terms of their involvement in design of health technologies in sensitive domains such as mental health. Highlighted complexities of engaging with young people in design work include understanding young people’s culture and language; ethical challenges [8]; appropriate methodologies [7]; and limitations on access to end users [12]. In addition, the stigma associated with mental health and the challenges faced by designers in understanding the lived-experience of mental illness create further barriers [14]. Given these complexities, great sensitivity is needed in involving young people in mental health discussions. While other techniques such as role-play is used to provide a better context to mental health conditions [13], the importance of understanding real world experiences of individuals with mental health conditions in design of mHealth is highlighted in the literature [14]. In our work with young people who self-harm and young people at risk of disordered eating behaviors, we wanted to...
better facilitate conversations surrounding personal experiences of mental health. In order to encourage young people to talk freely about their personal experiences we introduced the notion of persona to our participants. While personas are simplistic, our intention was to engage participants in further reflection on their own personal experiences, or the experiences of other young people with concerns about mental health.

REFERENCES