concerns, providing that the removal of tobacco is well managed and enhanced support measures are available for smokers. Some of the general factors shaping the successful introduction of smokefree prisons in Scotland are relevant to other areas of public health transformation e.g. setting clear objectives and timescales; collaboration and teamwork; and involving staff at all levels and end-users in change processes.

Thursday 10 September
Cohort Studies

OP67 HYPERTENSIVE DISORDERS OF PREGNANCY AND THE RISK OF CHRONIC KIDNEY DISEASE: A NATIONAL REGISTRY-BASED COHORT STUDY

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Results
Women who had preeclampsia had a higher risk of developing gestational hypertension, and 18,477 (0.9%) developed CKD. (4.7%) were diagnosed with preeclampsia, 43,964 (2.3%) had gestational hypertension, and 3,726,554 singleton live births. The mean age of women at first delivery was 27.0 (±5.1) years. Median follow-up was 20.7 (interquartile range 9.9–30.0) years. 90,917 women had 3,726,554 singleton live-births. The mean age of women with history of HDP are at increased risk of maternal CKD. Since 10% of women develop clinically significant CKD in their lifetime, the absolute risk of CKD related to HDP may be substantial. Women who experience HDP may benefit from future systematic renal monitoring to prevent CKD onset or progression.

OP68 TECHNICAL AND PRACTICAL CHALLENGES IN IMPLEMENTING DIGITAL APPLICATIONS FOR SELF-MONITORING VISUAL FUNCTION IN THE MONARCH STUDY

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Results
As of 17/02/2020, 233/274 (85%) participants (40% male; average age 75) from 6 hospitals self-tested their vision weekly using both apps. Data are transmitted from a remote setting to a care provider, though technical and practical challenges can arise. The MONARCH study is a multi-centre cohort study evaluating the diagnostic test accuracy of two apps for self-testing visual function at home to detect reactivation of neovascular age-related macular degeneration.

Background
The development and implementation of self-monitoring technologies for chronic conditions would ease the burden on patients and hospital services. Digital applications (apps) on smartphones or tablets can transfer information from a remote setting to a care provider, though technical and practical challenges can arise. The MONARCH study is a multi-centre cohort study evaluating the diagnostic test accuracy of two apps for self-testing visual function at home to detect reactivation of neovascular age-related macular degeneration.

Methods
Participants are provided with an iPod to test their visual function weekly using both apps. Data are transmitted automatically using a mobile router to online databases maintained by the app developers. Details of anticipated and unanticipated challenges faced throughout set-up, recruitment and follow-up, and remedial actions, have been carefully documented.

Results
As of 17/02/2020, 233/274 (85%) participants (40% male; average age 75) from 6 hospitals self-tested their vision at least once.

Anticipated challenges included potential inequalities in recruitment due to the technologies involved and the need for participant technical support. The primary reason given for non-participation was ‘put off by technology’ (21%). A participant helpline received 186 calls (19.7 hours). Issues with one or both apps was the primary reason for calls (47%), followed by connectivity issues (15%).

Unanticipated challenges included issues setting up and managing iPods remotely, technical issues with the apps, and adherence to self-testing during follow-up. Apple’s multiple device management system was used, which resulted in limited control over devices and failed to prevent standard system updates. System updates interfered with app compatibility and confused some participants. Issues with the app databases temporarily halted recruitment and data monitoring on several occasions and prevented some participants from testing.