**MN-CMS EHR Antenatal Visit Summary (ANVS) Medication Inbound Messaging Project** (2023)

**The vision:** to enhance patient care by developing automated, clear, relevant and timely communication of medication and vaccine information between GPs and the MN-CMS EHR, thereby improving medication safety at transitions of care. The standardisation of medication and vaccination information from multiple GP systems was key to this successful project. MN-CMS EHR advanced from a baseline of inconsistent, non-standardised medication information from multiple GP systems to a clear medication and vaccination history automatically filed in the EHR to optimise patient care and medication safety. This vision was achieved by the collaborative work of a multi-disciplinary team under the leadership of a Senior Informatics Pharmacist.

This project is a pathfinder, standardising medication-related information between GP systems and the EHR, it is a building block of Irish Summary Care Record development, as envisaged by ‘Sláintecare’ - the Irish Health Service Executive Strategic Plan.

**Background** In 2020, a pathfinder project enabled the bi-directional exchange of clinical information for ANV Shared Care messages between MN-CMS sites and GPs in structured electronic format, via Healthlink. This addressed the healthcare challenge of timely communication which supports enhanced patient safety and provides visibility of patient care information between the primary care and acute sectors.

It was quickly identified that the medication information in the ANV Shared Care messages inbound to MN-CMS was inconsistent across the 4 GP vendor platforms. This would have led to the non-standardised medication information recorded in the patient’s EHR which would carry potential clinical risk. In order to mitigate this challenge, the following requirements were identified:

* Standardisation of the medication and vaccine electronic message to a consistent format with defined headings and structure regardless of the originating GP system
* Provide this information in a standardised format in the patient’s EHR

**The key objectives of this innovation:**

* Reduce avoidable harm from medications by improving medication safety at transitions of care – a key priority for the World Health Organisation (WHO)
* Enhance patient care and improve health outcomes by developing automated, clear, relevant and timely communication of medication and vaccine information between GPs and MN-CMS
* Enable staff, in the provision of antenatal care in MN-CMS sites, to have full oversight of vaccines administered and medications prescribed and discontinued by the GP within the previous 12 months
* Implement Health Information and Quality Authority’s (HIQA) recommendation to focus on improving medication safety by using the electronic solution to reduce time spent by clinical staff on medication-reconciliation
* Ensure that the medication details in the ANV Shared Care messages inbound to MN-CMS allows the automated acquisition of GP medication information
* Provide support to clinical staff completing medication reconciliation by automating one source of medication information and facilitate the documentation of the most accurate medication history possible to support improved patient safety and care
* Enhance clinical audit and research through standardisation of medication information in alignment with Slaintecare Strategic Action 10, which advocates integrated patient-centered care and improving data, research and evaluation capabilities

**Benefits**

**Improved communication and Medication Reconciliation Efficiency**

Clinical staff using MN-CMS EHR have instant access to the details of medications prescribed, discontinued and vaccines administered to antenatal (prenatal) patients by their GP, supporting safer care.

**Standardised medication information** coming into MN-CMS from the different GP vendor systems is supporting integrated patient-centred care while also improving data, research and evaluation capabilities and enables further innovation, e.g. the development of audit and research capabilities to identify medications a patient is on pre-pregnancy and during pregnancy and the possible impacts of these medications.

**Reducing Healthcare cost**

* Improving operational efficiency by enhancing communication between GPs and MN-CMS EHR
* Value for money is achieved through:
  + The automated acquisition of the GP source of medication information facilitates the paperless documentation of the most accurate medication history possible for over 500 patients per week
  + Reducing the requirement for paper resources which also supports environmental sustainability
  + Replacing the requirement to contact GPs directly, saving a conservative estimate of 10 – 30 minutes per patient, if the GP surgery was accessible i.e. during limited office hours only, as evidenced during the validation process - saving > 80 – 240 hours/week

The optimisation of electronic messaging between GP systems and MN-CMS EHR has developed into **a pioneering, pathfinding project to enhance the semantic interoperability between the GP systems and an EH**R and provides the foundation upon which further innovation is unlocked. Potentially using the GP as a consistent, accurate source of medication information for all patients being referred into acute care to ensure seamless medication reconciliation at transitions of care which would save clinical staff time (GP’s and staff in acute care) spent on obtaining and supplying a medication history for all patients in Ireland.