

HSD103 STANDARDIZING POINT-OF-CARE MRNA-BASED GENE THERAPY PRODUCTION IN EUROPE: A COST AND CAPACITY ANALYSIS OF THE NANOSPRESSO PLATFORM

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Objectives: This study examines the business case for point-of-care (POC) production of personalized gene therapy (GT) with and without “Nanospresso” (NP), a closed-system platform technology for frequently administered mRNA-based therapeutics. They pose significant operational challenges that limit access and likely keep prices high—especially for rare and orphan diseases. Platform-based approaches enabling POC utilising personalised APIs could standardize production across multiple rare diseases, and therefore offer tailored patient access to otherwise unavailable treatments. **Methods:** We used Time-Driven Activity-Based Costing (TDABC) and structured expert elicitation (SEE) to develop and assess a standardized mRNA-based gene therapy production process, following good medical practice (GMP) guidelines. The standardized process was informed by interviews with pharmacists with compounding expertise and then quantified using time estimates. Workload and costs were calculated across scenarios (e.g., with/without NP, with/without in-house mRNA synthesis), and integrated into an interactive tool that models alternative scenarios. **Results:** Preliminary results suggest manual POC production requires an average of 41 hours of pharmacist or qualified person time per dose compounded, with a cost of €4030 (excluding the purchased API like mRNA). For bi-weekly delivery (e.g., metabolic liver diseases), this results in 7634 hours of annual work and equipment usage (€96k)—79 hours per month, per patient. NP-supported production reduces labour by 22 hours, and reduces equipment requirements, lowering costs to €1020. This cuts workload to 3619 (37) hours annually (monthly). Other modelled scenarios include in-house or centralized mRNA synthesis, significantly reducing overall cost due less quality assurance requirements before medication release. **Conclusions:** Closed-system technologies like NP could automate elements of CGT compounding, reducing operational strain and workload. In this scenario, hospitals may deliver therapies more efficiently, easing workload, and reducing the likelihood of errors. To enable adoption and patient access, infrastructure investments are essential as mRNA-based GTs move beyond clinical trials.



HSD104 STRENGTHENING ROUTINE CHILDHOOD IMMUNIZATION POST-COVID: GLOBAL STRATEGIES TO IMPROVE COVERAGE AND EQUITY

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Objectives: Global progress in immunisation has stalled, with many countries falling short of coverage targets. Measles outbreaks have resurfaced even in high-income countries such as England, Ireland and the United States. Political instability and conflict have further disrupted immunisation efforts in several regions. The COVID-19 pandemic further amplified vaccine hesitancy and disrupted service delivery. This scoping review aimed to identify strategies that have been employed globally to sustain and improve routine childhood immunisation coverage, with a particular focus on equitable access. **Methods:** A scoping review was conducted following PRISMA guidelines. Comprehensive searches were performed in Medline, Elsevier, Scopus, and Web of Science. The Population, Concept, Context (PCC) framework guided the development of the question and eligibility criteria. Studies reporting strategies to enhance equitable access to and coverage of routine childhood immunisation were included. Screening and data extraction were performed independently by two reviewers. Data were synthesised using descriptive and thematic analysis. **Results:** The database search, conducted in April 2025, identified 17,692 articles. Following a two-stage screening process, 58 studies were included for data extraction and synthesis. Most studies originated from high-income countries. Interventions were categorised both by nature and by the immunisation outcomes they targeted. Thematic categories included educational interventions, community engagement strategies, pro-equity approaches, health system strengthening, and communication strategies. With respect to outcomes, interventions were classified as addressing equity, access, or adaptability of immunisation services. **Conclusions:** The review highlights the global emphasis on multi-modal, targeted communication strategies to address vaccine hesitancy and improve coverage. However, significant gaps remain regarding the effectiveness and cost-effectiveness of these interventions, particularly in low- and middle-income countries. Further research is needed to evaluate the economic viability and real-world impact of these strategies to inform sustainable, equitable immunisation policies.



HSD105 SUBCUTANEOUS VS. INTRAVENOUS ADMINISTRATION IN ONCOLOGY: A LITERATURE REVIEW OF IMPACTS ON PATIENTS, PROVIDERS, AND HOSPITALS

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Objectives: To investigate the impact of the subcutaneous (SC) form compared to the intravenous (IV) form in oncology on patients, healthcare professionals, and hospitals. **Methods:** A pragmatic literature review (01/2017-09/2023) was conducted, guided by PICO methodology. Sixteen publications from 5 European countries (France, Italy, Germany, Spain and UK) were selected for analysis, comprising 15 scientific papers sourced from PubMed and one poster identified in the grey literature. **Results:** Among the 16 publications, focusing primarily on breast cancer and non-Hodgkin lymphoma, there were 8 observational studies, 3 clinical studies, 3 literature reviews, 1 white paper, and 1 economic model. Most studies (69%) compared the impacts of IV and SC forms from multiple perspectives. The impacts on healthcare professionals and hospitals were documented in 69% of the publications. Patient impacts were addressed in 56% of the studies, and economic impacts were explored in 63% of the documents. All studies highlighted that 69.0% to 98.9% of patients prefer the SC route over the IV route. This preference extended to healthcare professionals, 63.6-100.0% of whom in most studies also preferred SC administration. Using the SC route improved patient care by saving time in various management phases: treatment preparation (e.g., saving 5.6-21 minutes for rituximab), administration (82% mean reduction for targeted therapies), chair time (reduction of 52%-73.6% for trastuzumab), and duration of outpatient stay (reduction of 32.89%-68% for trastuzumab). The time saved could lead to increased hospital capacity for chemotherapy sessions (rise of 3.35% and 23.1% without and with SC dedicated processes). All studies exploring economic impact consistently showed savings (€109-€496 per cycle for rituximab). **Conclusions:** The SC route in oncology offers benefits for patients and healthcare professionals, leading to its preference. The substantial time savings can directly translate into opportunities for resource optimization and economic gains, which can be maximized by implementing dedicated pathways for SC administration.

HSD106 THE DM77 AND RARE DISEASES: ANALYSIS OF REGIONAL LEGISLATION IN ITALY

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Objectives: Ministerial Decree 77/2022 redefined community healthcare within the Italian National Health Service, promoting innovative organizational models for patient management, including for individuals affected by rare diseases. These conditions require continuity of care and multiprofessional integration—key elements in the architecture of DM77. **Methods:** A systematic review was conducted on regional legislation and healthcare planning acts issued by Italian Regions and Autonomous Provinces between 2022 and 2025. The search strategy included a query dedicated to rare diseases, later refined to extract only regional regulatory documents. A time filter was applied to include only documents published from the entry into force of DM77 up to 2025. In total, 679 official resolutions were analyzed. **Results:** A total of 36 documents were identified as addressing both DM77 and rare diseases. The analysis revealed strong heterogeneity among Regions. Some developed specific care pathways, integrating rare diseases into local health networks through Community Health Centers (*Case della Comunità*), multidisciplinary teams, and home care services. In Campania, 12 referral centers for specific rare diseases or disease groups and 6 centers of excellence were identified; the regional framework also defined the organizational structure based on the hub-and-spoke model and care pathways for individuals with rare conditions. A similar approach was adopted by the Piedmont Region. Other Regions made only formal references to rare diseases, without operational measures. Innovative regional experiences were also recorded, such as early management models introduced in Lombardy. This variability reflects divergent approaches to healthcare planning and different stages of DM77 implementation at the regional level. **Conclusions:** This analysis represents the first national mapping of the integration between DM77 and rare diseases, highlighting the need for interregional coordination and systematic monitoring to ensure equity and quality of care across the country.

HSD107 THE EVOLVING ROLE OF PHARMACISTS AS VACCINATORS IN NEW ZEALAND AND DENMARK

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Objectives: The study objective was to examine trends in pharmacist-administered influenza vaccination in Denmark (2009-2019) and New Zealand (2015-2021) following policy changes in each country expanding access to pharmacy-administered vaccination. **Methods:** For Denmark, an interrupted time series (ITS) analysis was conducted using national surveillance data (2009-2019) to evaluate changes in influenza vaccination coverage rates (VCRs) following a 2015 policy authorizing pharmacist vaccination for at-risk groups. Sensitivity analyses were conducted to assess potential confounding. For New Zealand, national immunization data (2015-2021) was retrospectively analyzed to assess trends in the number and percentage of influenza vaccinations administered by provider type to adults aged ≥65

