1ISG-008 USABILITY EVALUATION OF AN INSULIN MANAGEMENT SOLUTION WITHIN AN ELECTRONIC PATIENT RECORD

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Background and Importance There is evidence to suggest that poor usability of health information systems is associated with negative outcomes including low efficiency and increased risk of medical error. Standardised usability questionnaires have been developed to evaluate usability and recently a novel tool was developed to measure the usability of clinical decision support systems in healthcare environments.[1] A customised insulin management solution was developed and implemented in our hospital to migrate insulin prescribing, administration and review from paper to our electronic patient record (EPR). Assessing the usability of the solution was identified as a way of determining potential areas for optimisation and training post-implementation and of informing future design decisions.

Aim and Objectives

- To assess usability of the insulin management solution
- Compare usability scores across the clinical disciplines

Material and Methods The Healthcare Systems Usability Scale (HSUS) was used to assess usability among system users from the medical, nursing, pharmacy and clinical nutrition professions. [1] HSUS assessed usability in four subscales; patient safety and decision effectiveness, workflow integration/ease of use, work effectiveness and user control. An Independent-Samples Kruskal-Wallis Test was used for statistical analysis.

Results 226 users from medical, nursing, pharmacy and clinical nutrition disciplines completed the HSUS assessment. The average usability score was 81%. There was no significant difference in overall usability scores based on the respondents' discipline. Concerning subscales, the only significant difference between disciplines was in the workflow integration/ease of use domain between the pharmacist and nursing groups (70.8% vs 79.6% p = 0.020).

Conclusion and Relevance The insulin management solution implemented into the EPR was regarded as highly usable based on the results of the HSUS in comparison to another study where the usability score was only 64%.[1] The variability between the pharmacy and nursing result warrants further investigation and will inform engagement requirements for future project work. Finally, this study adds to the evidence base in this important area where real-world data is still limited.

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Conflict of Interest No conflict of interest.

1ISG-009 PHARMACOECONOMIC ANALYSIS OF AN ALTERNATIVE DOSAGE REGIMEN FOR PALIVIZUMAB

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Background and Importance According to the Summary of Product Characteristics (SmPC)[1] of palivizumab, the usual regimen consists of five doses of 15 mg/kg/dose, intramuscularly, every 28 days.

For the 2022–2023 campaign, we established a novel regimen based on the Reuter et al.,[2] pharmacokinetic model whereby the dosage per kg decreases as the season progresses, and the initial dosage is defined based on postmenstrual age (PAGE) which is described as gestational age plus chronological age, both measured in weeks (Table 1).

Aim and Objectives To assess the effectiveness of a novel palivizumab regimen as well as to determine the cost savings derived from the implementation of this regime.

Material and Methods Patients were classified according to their PAGE. The total dosage received per child with the novel protocol was compared with the dosage that they would have received had they been given the dosage as specified in the SmPC.

The effectiveness of the novel protocol was assessed showing no hospital admissions nor emergency department visits in patients undertaking the novel regimen.

The total expenditure on palivizumab during the 2022–2023 season was analysed comparing the expenditure on the PAGE-defined regimen to the theoretical expenditure of SPC-defined regimen.

Results

Abstract 1ISG-009 Table 1 Shows the alternative dosage regimen based on the PAGE system

PAGE (gestational +postnatal age, weeks)	1st dose (mg/kg)	2nd dose (mg/kg)	3rd dose (mg/kg)	4th dose (mg/kg)	5th dose (mg/kg)
<40	20	17,5	15	12,5	10
40–65	17,5	15	12,5	10	7,5
>65	15	12,5	10	7,5	5

Abstract 1ISG-009 Table 2 Shows the cost savings derived from the use of the novel dosage regimen

PAGE (gestational postnatal age, weeks)	Patients (n)	Average Weight (kg)	Total dose administered (mg)	Total theoretical dose as defined by SPC (mg)	Cost savings (mg)	Cost savings (€)	Average patient savings (€)
<40	18	4,3	4270,9	4480,6	209,7	1.514,39 €	84,13 €
40–65	13	6,4	4479,4	5060,6	581,2	4.197,21 €	322,86 €
>65	16	9,5	5897,5	8119,1	2221,6	16.044,26 €	1.002,77 €
Total	47	6,5	14647,8	17660,2	3012,5	21755,85 €	462,89 €

Conclusion and Relevance The PAGE-defined regimen results in significant cost savings compared with the conventional SmPC-defined regimen.

The pharmacist's intervention contributes to the optimisation of health resources, further increasing the sustainability of the health system.

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Conflict of Interest No conflict of interest.

1ISG-010 ECONOMIC IMPACT OF THE CLINICAL PHARMACIST ON THE REDUCTION OF DRUG-RELATED PROBLEMS BEFORE THE INITIATION OF AN ANTI-TUMOUR TREATMENT – A PROSPECTIVE MULTICENTRE TRIAL

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Background and Importance Multiple studies have shown a high rate of drug-related problems (DRP) in patients with cancer. To reduce this risk, several oncology departments have set up multidisciplinary assessment programmes that include pharmaceutical consultation.

Aim and Objectives In a context of limited resources allocation, our study aims to evaluate the economic impact of clinical pharmacists' interventions (PIs) on DRP detection from a hospital perspective.

Material and Methods A French prospective non-interventional double-centre study was set up in 2020. Patients treated for solid tumours were included between February 2020 and March 2021.

First, we calculated the pharmaceutical time based on consultations and analysis times. The time spent has been valued (i) to an average annual full-time equivalent (FTE) and (ii) by the grade of the contributor (2022 salary scales). Two scenarios have been established (low/high salary grades).

Second, we selected PIs regarding clinically significant drug-drug interactions related to drug toxicity (evaluation made by an expert panel). We sought to estimate the cost based on the avoided clinical consequences. We valued the likely 'diagnosis related groups' of the avoided event thanks to the 2019 national survey on hospital costs. Costs were weighted by an occurrence probability based on the level of evidence: p=0.01 for very low; p=0.1 for low; p=0.4 for moderate; and p=0.6 for high.

Results 438 cancer patients were included: 62% of males, mean age of 65+/-13 years.

Per patient, the pharmacist average time was 39+/-15 minutes: 23+/-7 minutes of interview and 16+/-11 minutes of analysis. Total time was 283 hours, and the estimated annual FTE was 0.13. The total cost was estimated between € 4,199 (low salaries) and € 5,250 (high salaries) per year. Cost was estimated between € 11.4 and € 14.3 per patient and between € 18.42 and € 23.02 per drug-drug interaction.

122/266 PIs were evaluated to be clinically significant drug-drug interactions related to drug toxicity that could have caused a hospitalisation. Cost of hospitalisation for these serious avoidable adverse events was estimated on average at € 4,869. Avoided hospitalisation costs were estimated at € 180,633.

Conclusion and Relevance Clinical pharmacists are an indispensable and legitimate member of therapeutic assessment programmes for cancer patients. They help in reducing DRP in a cost-effective manner.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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1ISG-011 OPPORTUNITY FOR DAILY HOME-BASED MANAGEMENT OF CHRONIC PATIENTS FROM THE SAME AREA USING AN INTERPROFESSIONAL NETWORK MODEL DEVISED, SET UP AND IMPLEMENTED FOR THE COVID-19

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Background and Importance The Coronavirus SARS-CoV-2 pandemic highlighted the fragility of National Health Service based on a too specialised and hospital-centred approach. In the pandemic context, the need to reverse the model by focusing on the needs of the community became clear.

Aim and Objectives The main aim of promoting home-based management as much as possible for both chronic and acute conditions, can be achieved through the utilisation of a model of an integrated network involving all stakeholders in the care and assistance process, utilising new technologies and telemedicine systems as done during the pandemic period with an ad hoc interprofessional network within a local health authority.

Material and Methods The model utilised interconnected and functionally integrated structures and nodes, with defined pathways and operational procedures based on dedicated telemedicine platforms. These platforms facilitate the comprehensive management and care of Covid-19 patients by all network stakeholders. Results were monitored using specific and dedicated indicators, collecting and analysing data from the period when the care of positive Covid patients began (November 2020), whose management did not require hospitalisation.

Results From November 2020 to December 2021, the number of patients living in the territory under home management in Home Health Care Units, non-ambulatory residential facilities undergoing non-pharmacological therapy, non-ambulatory vaccinated individuals receiving home vaccination, and vaccinated individuals in residential facilities, amounted to 38,223. Among these, 37.8% tested positive for Covid. The total number of accesses during this period was approximately 94,000. The shift has been significant, transitioning from managing the entirety of patients in hospitals to slightly over 4.5% of the total managed in that period.

Conclusion and Relevance The reproducibility of this system assures the possibility of further network implementation, not only in emergencies but also for the daily management of chronic patients. Moreover, in a time when, among other things, Mission 6 of the PNRR has allocated resources