in 1945 (13.50%) but also decreased to 0.10% by 1950. Auranti (mean = 3.60%), a plant extract, was never prescribed in 1945, however, prescriptions increased by 1950, becoming the second most prescribed drug during this year (8.30%).

Conclusions: The results clearly indicate a change in prescription trends through the years, even in such a small time frame. Surely the change in prescribing trends for sulphathiazole can be traced back to the 1945-1950 period. Data for other time periods is currently being analysed.

C2

Trends in areas of practice of pharmacists: a fourteen year analysis

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Aims: To analyze manpower and identify trends in the pharmacist supply, demand and practice patterns, pinpointing and communicating problems to the educators and stakeholders who control decision making and funding for the profession.

Methods: Workforce data retrieved throughout the last 14 years was selected – 19951, 19982, 20033, 20054 and 20095, focusing on trends in pharmacy practice.

Results: Registered pharmacists: 557 in 19951, 628 in 19982, 766 in 20033, 798 in 20054 and 932 in 20095 with a female to male ratio of 3:2. Principal areas of practice were community pharmacy, hospital, marketing-sales setting and pharmaceutical-analytical industry. Community Pharmacy: In 1995, 35% (196); in 1998, 38% (238); in 2003, declining to 35% (268), in 2005 increasing again to 36% (286) and in 2009 decreasing to 30.2% (281). Hospital setting: In 1995, 13% (71); in 1998, 15% (92); in 2003, increasing to 17% (130); in 2005 declining to 16% (131), and in 2009 declining to 8.8% (82). Marketing-sales setting: In 1995, 12% (65); in 1998, declining to 10% (61); in 2003 increasing to 15% (115), in 2005, increasing to 16% (129) and in 2009 decreasing to 10.3% (96). Pharmaceutical-analytical sector: In 1995, 4% (20); in 1998, 4% (22); in 2003, 4% (31), in 2005, increasing to 6% (48) and in 2009 increasing to 7.6% (71).

Conclusions: Community pharmacy is the major principal area of practice, followed by the sales-oriented practice. Over the 14 year analysis, an increase in pharmacists working in the pharmaceutical and analytical areas occurred due to the expansion of the pharmaceutical industry in Malta.

C3

English-Maltese dictionary of medical and pharmaceutical terms

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Aims: The aims are to continue the compilation of an English-Maltese dictionary of medical and pharmaceutical terms (from letter 'F') initiated by Eliza Camilleri1 and validate the translated terms with laymen, healthcare professionals and linguists.

Methods: Terms which had already been translated into the Maltese language were gathered from the Medicines Authority's (MA) 'Glossary of Terms'2 and from the 'English-Maltese Dictionary'3. Terms not yet translated were extracted from Mosby's Medical Dictionary4 and translated in accordance with MA's requirements and in compliance with grammatical and linguistic rules. Validation of non-technical terms by laymen (24) is being done by interviewing patients in waiting areas of Health Centres. With regards to validation by healthcare professionals, feedback is being obtained through the use of a questionnaire.

Results: A total of 2899 words, starting with letters 'F', 'G', 'H' and 'I' have been translated. Entries elicited from MA's 'Glossary of Terms'2 and from the 'English-Maltese Dictionary'3 amounted to 193 and 674 respectively, whereas newly translated terms amounted to 2,032. The terms starting with letter 'F' and 'G' have been to date validated by laymen and the majority (93%) of the translated terms were fully understood. In cases where terms were not fully comprehended, further discussions were made with the interviewees and amendments or additions to the translated terms were made accordingly. A booklet with such translated terms was then published.

Conclusions: This dictionary will eventually be used mostly by local authorities and pharmaceutical companies to translate medicinal documents such as the summary of product characteristics and patient information leaflets. The availability of patient inserts available in our mother language is expected to improve therapeutic compliance as it will eventually help local people in understanding more the product leaflets.

C4

Developing a drug information bulletin

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Aims: To compile a bulletin to reflect the current pharmaceutical information of new medicinal products placed on the local market and variations in the Summary of Product Characteristics of locally available drugs, and to evaluate the usefulness of the bulletin among pharmacists and pharmacy students.

Methods: A list of new medicinal products and another list of locally available medicines that had undergone variation were compiled. Further information on these products was obtained from regulatory authorities and local agents. The front cover and a set of templates were designed.

A concise article on each product was written and published in the bulletin. The bulletin was reviewed by a panel of 5 experts before dissemination. A quotation was obtained from a number of local printing presses and local pharmaceutical firms were contacted for sponsorship.

A questionnaire to evaluate the bulletin was developed, validated and distributed with the bulletin. Five hundred printed copies of the bulletin were self-administered to pharmacists from all areas of practice and sent to 210 students via electronic mail.

Results: The bulletin was entitled 'Drug Information Bulletin' and was first published in February 2009. The first issue included 26 articles on new medicinal products placed on the local market and 37 medicinal products that have undergone a variation in the Summary of Product Characteristics between December 2007 and May 2008. Four hundred and fifty nine participants (330 pharmacists, 129 pharmacy students) completed the evaluation questionnaire for the first issue. The respondents agreed that the

bulletin was: up-date, clear and concise (93%, n=427), user-friendly (94%, n=432) and useful (97%, n=447).

Ninety seven per cent (n=443) of the respondents stated that the information present in the bulletin was new to them. In fact, 64% (n=210) of pharmacists and 19% (n=65) of pharmacy students strongly agreed that the bulletin helped to keep them informed.

Conclusions: The first issue of the bulletin provided an accessible means to deliver unbiased information about the introduction of recent medicinal products on the local market and was positively received by pharmacists and pharmacy students.

C5

Evaluation of pharmacist clinical recommendations in a geriatric hospital

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Aims: This study aimed to evaluate and quantify the impact of recommendations made by pharmacists at Zammit Clapp Hospital, by recording the number and type of recommendations made by pharmacists reviewing the drug treatment of patients sixty years of age and older, noting acceptance of the recommendations by physicians and assessing the clinical significance.

Methods: To standardise the recording of recommendations, a documentation form was designed. This was piloted in one ward for two weeks. Subsequently each of the three pharmacists providing inpatient services were asked to record specific details of all recommendations during a specified 12-week period. For the purposes of this study, the definition of a recommendation was "Any proactive or reactive activity made with the intent of improving patient management or therapy, involving the application of the pharmacist's knowledge to a specific patient or physician order." The clinical impact of the pharmacists' recommendations was independently assessed by the pharmacists making the recommendations and a panel made up of two pharmacists and a medical doctor who had to rate the contribution of each recommendation as major, moderate, minor or no clinical significance.

Results: A total of 263 valid pharmacist recommendations were documented during the study period. The most frequent recommendations, accounting for 33 per cent of the total were adjustment to dosage, frequency and time of administration (21 per cent) and discontinuation of a medication (12 per cent), of which 37 per cent featured central nervous system drugs. Acceptance by physicians of pharmacist recommendations was 80 per cent. The majority of recommendations (61 per cent) were rated by the evaluating panel to have provided a moderate contribution to the quality of patient care.

Conclusions: Pharmacists made many recommendations that affected the care of hospitalised elderly patients, of which medical practitioners accepted the vast majority. The majority of pharmacist recommendations were of significant clinical benefit to patients effectively demonstrating the pharmacist's essential contribution in the care of elderly hospitalised patients.

C6

Evaluation of the impact of the rheumatology clinical pharmacist on quality of life and perceptions of rheumatoid arthritis patients on methotrexate

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Aims: To measure the impact of a clinical pharmacist's contributions to the care of rheumatoid arthritis patients on methotrexate.

Methods: The main outcome measures used were quality of life (the Health Assessment Questionnaire) and the Medical Outcome Short Form Questionnaire-SF36); patients' beliefs and concerns (Beliefs about Medicines questionnaire)1 and their wanting for information (Desire for Information questionnaire)2. Patients were randomised to two groups (A and B). At phase 1, Group A patients were administered the questionnaires at baseline (t0), and then offered a consultation session with the pharmacist. At phase 2 (time 4-8months) they were re-assessed using the same questionnaires. At phase 3, (time 10-11months) the patients were re-assessed for the third time. Group B patients were assessed at baseline (t0 - phase 1), re-assessed a second time at time 4-8 months (phase 2) and then offered a consultation session with the pharmacist. At time 10-11 months (4-7 months after a consultation - phase 3), these patients were re-assessed.

Results: Eighty-eight patients, 72 (82%) female, mean (SD) age 61 (12) years participated. Results of the questionnaires were analyzed to compare pre- and post-pharmacist's session data. The quality of life of the patients improved significantly following the pharmacist's session ($p<0.05$) for both the Health Assessment Questionnaire and the SF36 questionnaire. The pharmaceutical care session resulted in a statistically significant lower desire for information, a lower extent of information desired, a reduced concern expressed about the medicines and a greater expression of necessity towards the medication ($p<0.05$) compared to prior to the pharmaceutical care session.

Conclusions: The study showed that a consultation with a rheumatology specialist pharmacist improves the patients' quality of life. More work is needed to demonstrate effects on clinical outcomes and patient perceptions after a continued period of pharmaceutical care delivery.