Basque Country: Design and implementation of interventions aimed at improving the safety prescription

Part 1: General Information

Publication on EIP on AHA Portal	No
Copyright	Yes
Verification of the Good Practice	No
Evaluation of the Good Practice	Yes
Type of the Good Practice	Notable practice

Part 2: Description of the Good Practice

Name of the Good Practice	Design and implementation of interventions aimed at improving the safety of prescription
Short name (Acronym)	Not applicable
URL of the Good Practice	https://donostialdea.osakidetza.eus/es/Salud/FMS/PPP/Paginas/default.aspx
Geographical scope	Local level
Country	Spain
Region(s) involved	Basque Country
Status of the Good Practice	On-going
Stakeholders involved	• Hospitals • Primary care centres • Specialised physicians • Nurses • Pharmacists • General Practitioners • Nursing homes • Research centres • Regional public authorities
Size of population covered	10,000 - 99,999
Targeted audience	18-49, 50-64, 65 - 79, 80+

Summary of the Good Practice

The practice includes management of polypharmacy in multimorbid elderly or frail people. The main objective is to improve the appropriateness and safety in prescribing the Integrated Care Organisation Donostialdea. The specific objectives are: to know the prevalence of inappropriate prescribing (IP) and security issues of medicines, designing interventions aimed at improving safety in prescribing and assess their impact.
It is a planned strategy of progressive implementation.

The components are:

- Training aimed at medical and nursing professionals with the following modules: general training in polypharmacy and conservative prescribing, medication reconciliation, review of mediation (tools and case studies); Medication review in specific areas related to each project to be implemented (excessive polypharmacy, renal failure, STOPP- START criteria, osteoporosis, medicine safety signals, etc.).
- Methodology: training "cascade" interactive. The promoter group, led from Primary Care Pharmacy and of multidisciplinary composition, prepares materials and provides "training of trainers" (a reference-forming in each primary care unit).
- Consensus between primary care and specialist-care
- Identification of multimorbid patients through the tool "Osakidetza Business Intelligence (OBI)"
- Medication Review by the primary care physician
- Evaluation and feedback to professionals

Transferable key aspects: training methodology, automation of consults, local consensus process, medication review methodology, evaluation.

Key words: drug-related side effects, adverse reactions, inappropriate prescription, implementation, medication reconciliation.

Good practice being part of the larger programme

Yes.

It is part of the strategy for the Rational Use of Medicines aligned with the strategy of patient safety and chronicity of our health organisation.

Challenges / problems addressed by the good practice

- High prevalence of polypharmacy in our environment and exponential upward trend.
- High prevalence of inappropriate prescribing and safety problems associated with drugs in our environment.
- Coordination problems between primary care and specialized in managing medication in complex patient care.
- Difficulty to implement changes related to improving the appropriateness of prescribing. It is necessary to design, pilot, evaluate and implement effective interventions tailored to the context.

Importance of the challenges / problems before starting to implement good practice

- Prevalence of polypharmacy in the Integrated care organisation:> 5 drugs, 52,757 patients> 10 drugs, 11,281 (47% and 12% of people over 65).
- Approximately one in five prescriptions are inappropriate. 70% of our polymedicated has at least one general STOPP criteria. Security alerts of the Spanish Agency for Medicines and Health Products (AEMPS) affect about 1,000 patients each year.
- Discrepancies are responsible for more than half of medication errors that occur in care transitions. Using Presbide (integrated electronic prescription tool) was residual in 2014 specializing in care.

Environment before the good practice was implemented Within the lines of work "Patient safety", the review of medication in a punctual manner was promoted. However, no specific training was provided, or target populations were identified, and then was no tool as OBI (Oracley business intelligence) to design consultations to identify inappropriate prescribing. Neither was assessed their impact.
Key innovative elements of the good practice and how the good practice improved situation compared to previous practice • The practice systematizes the process of reviewing medication, by promoting the use of tools with implicit and explicit criteria. • The cascade training through the training of trainers allows in a reduced time, the deployment to all primary care units (UAP) of the Integrated care organisation (20, 250 family physicians). The involvement of trainers is high and the methodology is participatory. Its reception has been very good (above average scores 8.5 out of 10 in all educational activities), attended> 70% of recipients. • The electronic identification of populations at risk and inappropriate prescriptions allows acting on large patient populations, and to automatize and monitor the consults. • Promotes consensus between primary care and specialized care, through meetings with heads and service leaders, focused on issues of specific, measurable and assessable security, promoting mutual understanding and agreement.

Part 3: Transferability of the Good Practice

Cost-effectiveness of the good practice (including all kind of costs and outcomes such as better health, quality of life or other resources)	Equal costs, improved outcomes
Resources required for the deployment of the good practice (personnel, equipment, facilities, ICT and other resources required) The practice has been implemented with the resources available in the integrated health organisation Donostialdea. The training is integrated into the continuous training plan of the organisation and teachers have not received any additional resources, pharmaceutical practice are regular staff, as well as all the promoters and trainers. Medical professionals who perform medication review their patients use their time for consultation, considered a care activity. The tools we use (OBI; Presbide, etc.) are owned by Osakidetza. However, the resources required by the practice are as follows: • Staff It requires at least a pharmacist (preferably within the team), whose functions are to identify areas of inappropriate prescribing, prioritize and plan activities and tasks, conduct literature reviews and writing drafts of teaching materials, participate in training, get patient identifiers	

through OBI and assess impact. A promoter group: multidisciplinary team (care physicians, nursing, internal medicine, geriatrics) to prioritize and plan activities and tasks, review the contents of the training and teaching assignments. A trainer for each primary care unit and a leader of the hospital service.
It is desirable to have methodological support (in our case, the Research Unit Primary Care).

- ICTs

A Web page on which all the contents of the training and projects are available. In our case, we use the Intranet of the Integrated care organisation Donostialdea (https://donostialdea.osakidetza.eus/es/Salud/FMS/PPP/Paginas/default.aspx).

Electronic prescription system implemented. In Osakidetza, Presbide is a common system for primary and specialty care: in primary care, virtually all prescriptions are electronical (the use of prescription paper is residual).
A data mining tool electronic prescriptions. In our case, Oracle Business Intelligence (OBI)

Total budget of the Good Practice	€10.000 -€ 99,999
Source of funding	Regional funding

The main actions that have to be done to deploy the Good Practice

The main actions have been the following:

- Recognition: The Integrated care organisation managers has promoted and facilitated the project. The work of professionals involved has been recognized. The time for medication review counts as care time and there is a specific act for registration. The time to prepare trainers sessions counts too as care time.
- Professional Roles: The Roles of the pharmacy unit, the promoters group and trainers have been defined. The professionals have voluntarily accepted these roles.
- Training: Training is one of the essential components of practice. It is integrated into the continuing education of the organisation, which has its accreditation system.
- Recruitment: At least requires a pharmacist to lead the process, a promoters group and a trainers group.

Issues during the implementation of the Good Practice

The five main difficulties are the following:

- Lack of time for the medication review, because the practice is done in routine clinical care.
- Difficulty to involve care professionals specialized in reviewing the established treatments.
- Resistance primary care physician to modify prescriptions initiated by other physicians, usually of specialized care. - Resistance of the patient to discontinuation of treatment due to perception of benefits or fear of relapse.
- The inertia of professionals, facilitated by the prescription system to automatically renew prescriptions.

Additional resources required to scale up Good Practice

No.

Basis to support sustainability of the Good Practice

- The excellent reception and evaluation of successive training activities (2013-2016). Average ratings above 8.5 out of 10 in all educational activities, with an assistance> 70% of receivers.
- In the case of osteoporosis and the prescription of bisphosphonate treatments of more than 5-year duration, after the reduction obtained in 2014 (44.6%), prescription remains in 2016, without having evidenced a progressive return to the initial situation.
- The prevalence of certain potentially inappropriate prescriptions (such as nonsteroidal anti-inflammatory drugs in heart failure or co-prescription of NSAIDs with anticoagulants or antiplatelet) keeps reduced after the intervention in 2014.

Evidence to observe the Good Practice

A visit to implementation site.
Memory of the practice:
https://donostialdea.osakidetza.eus/es/Salud/FMS/Paginas/default.aspx

Video:
https://donostialdea.osakidetza.eus/es/Docencia%20e%20investiga/BP/Paginas/default.aspx

Article: Newspaper (Gaceta Sanitaria, 2016): "Deprescribing long-term treatments for osteoporosis with bisphosphonates in primary care in the Basque Country

Part 4: Viability assessment of the Good Practice

Time needed to deploy the Good Practice

Between one year and three years.

- 2013: - Presentation of the Proposal to the managers. - Creation of the promoter and trainer groups. – Training process on polypharmacy general concepts and conservative prescribing - Seminar of the promoter group with all the trainers for training evaluation, barriers identification and facilitators to medication review, and the establishment of priorities and lines of work.
- 2014: - Practical implementation of the general concepts in the area of osteoporosis, "Bisphosphonate deprescription in long-term treatment" by a multifactorial intervention that included training, patient identifiers and consensus with specialized services referral hospital. - Specific training workshops for nurses on "Monitoring and Medication Reconciliation". - "Prudent Prescription" workshops and a practical workshop in online drug information sources. - Design and deployment of the intervention: "Review of medication in people over 80 years with 10 or more drugs" cascade training, patient identification and potentially inappropriate prescriptions, review by the primary care physician. - Design and deployment of the intervention: "Adequacy of drugs in patients with renal failure and diabetes."

- 2015 - Impact assessment of projects 2014: "Deprescription of bisphosphonate in long-term treatment", "Medication review in people over 80 years with 10 or more drugs", " Adequacy of drugs in patients with renal failure and diabetes ". - Design of intervention: "Collaboration primary care - specialized care in patients with polypharmacy".
- 2016 - Deployment and implementation of the intervention: "Collaboration primary care- specialized care in polypharmacy".

Investment per citizens / patient / client in terms of financial resources

Between €100 – €1.000 per targeted citizen / patient.

It is really less than 100€, specifically are 30€ per patient. The cost calculation is shown below:

- Training: - 1 training of trainers workshop: 300 € (6 hour workshop taught by two people (total 12 hours), cost / shared time: 25 €. - 40 sessions in Primary Care Units: 1800 € (two per unit), 1.5 h each, cost / time one teacher = 30 €. - Meetings of the promoter group: 1920 €. 3 annual meetings of 2 hours, 8 persons, 40 € / hour. - Total training: 4020 € / year. - Training for three years: 12060 €. - Expenditure per patient: 12.060 (53.0000 polypharmacy): 0.2 € / patient Pharmacist: half day / year, € 50,000 / year, 25000 € / year. - Pharmaceutical three years part- time: 75000 €. - Expenditure per patient (polypharmacy 53.0000): 1.4 €. Time primary care physician for review: 27 € / patient. 1 hour (40 €.) For a full review of medication and 20 minutes (13 €) for review of specific criteria is estimated inappropriate prescribing. It is estimated that half of patients will require a full review and half a partial, average of 40 minutes per patient. In three years could be revised 53,000 polypharmacy patients (70 patients / physician and year).

Evidence behind the Good Practice

Documented evidence. Evidence is based on systematic qualitative and quantitative studies.

Security Alerts: in 2014-2015 have reported five security alerts involving 2,000 patients. - Deprescription of bisphosphonate: 44.6% (1212/2717) of the active treatments were discontinued. shifts to another group of drugs for osteoporosis only in 5.9% of cases were observed discontinued. The estimated drug saving was € 251,232 compared initial cost of 697,019 €. - Polymedicated over 80 years with 10 or more drugs: A reduction was observed in the number of drugs of -0.88 (95% CI. 0.72 to -1.04, p <0.0001, representing a reduction of 7.4% of all prescriptions are he observed a reduction of 27.1% of potential security problems. - Renal failure and diabetes: A decrease was observed in the prevalence of inappropriate prescriptions of 56% (64/114) in the unit in which was implemented (Zumaia-Zestoa- Getaria). - Collaboration primary care-specialized care in polypharmacy. On going:. 7 hospital services have been implicated. Inappropriate prescriptions affect to the following number of patients per service: cardiology (3926), digestive (3384), rheumatology- traumatology (4817), gynaecology (429), mental health (530), respiratory (142).

Maturity of the Good Practice

There is evidence that the practice is economically viable and brings benefits to the target group. Further research and development is needed in order to achieve market impact and for the practice to become routine use.

Economic viability. As discussed in previous sections, in our organisation, the practice has been carried out without additional resources (except for 30,000 euros in three years corresponding to finance projects via the initiative "Botton up" of Osakidetza). However, in question 33, we have made an estimate of what it would if it were made extra resources. On the other hand, in patients with polypharmacy, the practice has been shown to reduce the number of total prescriptions (7% reduction) and the number of inappropriate prescriptions (27%). Given that the annual cost per patient polymedicated in our OSI is 490 €, in three years would be 1470 € / patient, a 7% reduction would save on drugs of 103 € above the cost of the intervention. The economic impact of reducing inappropriate prescribing on hospitalizations is unknown.

Estimated time of impact of the Good Practice

Medium impact – e.g. shortly beyond the pilot project period.

Impact observed

Better quality of life (societal)

Assessments that have been made are short-term. We have preliminary data indicating that the practice is sustainable (question 30). It has substantially improved the potentially inappropriate prescriptions but its impact on hospital admissions is unknown. However, throughout 2016 and also at work on osteoporosis have reached agreements with the 7 hospital services.

Transferability of the Good Practice

Ready for transfer, but the innovative practice has not been transferred yet. The innovative practice has been developed on local/regional/national level and transferability has been considered and structural, political and systematic recommendations have been presented. However, the innovative practice has not been transferred yet.

They have identified the following practice recommendations for transferability and sustainability:

- In order to the work line has continuity, it is essential to promote collaborative work between clinical professionals from various primary care units and hospital services of the organisation as well as other agents involved in the treatment of our patients (medical centres residential, mental health, etc.).
- The cascade training strategy has been very well received by clinicians, with a high assistance and high training activity scores. It generates group dynamics and encourages participation and involvement of clinicians. The presence of primary care

pharmacists, now integrated into the integrated care organisation, is a factor that facilitates the transferability to other integrated care organisations of Osakidetza.

- The support of the management of the organisation to the line of work has been fundamental. The fact that polypharmacy and prudent prescription are priority areas in all health organisations of Osakidetza facilitates the transferability.
- The feedback of results to the health centres professionals is another important element that contributes to the permanence of the changes achieved.
- The exploitation of the OBI tool, although it requires an initial investment of time for handling, is a strategy that can cover large patient populations and evaluate results. This tool is available in all Osakidetza service organisations and pharmacists have been trained for its exploitation.
- It is needed to follow in the line of collaboration between primary care and specialized care, promoting mutual understanding and agreement to move towards a more collaborative model and gradually incorporating other services. The integrated care model facilitates this aspect, although still significant barriers remain.

Part 5: Your organisation

Name of the organisation	Integrated Care Organisation Donostialdea
Address of the organisation	Begiristain Doktorea Pasealekua, 117, 20080 Donostia, Gipuzkoa
Type of organisation	Integrated Care Organisations
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Basque Country: Care plan for elderly