



Community pharmacy & primary care integration: qualitative study on stakeholders' opinions and interventions

Amaia Urionagüena ^a, Celia Piquer-Martinez ^b, Shalom Isaac Benrimoj ^{a,b}, Begoña Calvo^a, Victoria Garcia-Cardenas ^c, Fernando Martinez-Martinez^b and Miguel Angel Gastelurrutia ^{a,b}

^aPharmacy Practice Research Group, Faculty of Pharmacy, University of the Basque Country, UPV/EHU, Vitoria-Gasteiz, Spain; ^bPharmaceutical Care Research Group, University of Granada, Granada, Spain; ^cPharmacy and Pharmaceutical Technology Department, Social and Legal Pharmacy Section, Faculty of Pharmacy, University of Granada, Granada, Spain

ABSTRACT

Background: Health systems worldwide are under pressure. Integration seems a possible solution to improve healthcare systems efficiency. This research aims to gather stakeholders' opinions on integrating community pharmacy and the primary healthcare system and secondly to explore and prioritise interventions for an initial integration plan.

Method: Using a constructivist qualitative research approach, a two-phase qualitative study was conducted in the Basque Country, Spain. Thematic analysis using NVivo® was undertaken on data gathered during focus groups and semi-structured interviews (phase 1). During phase 2, a nominal group prioritised potential integration interventions identified in phase 1.

Results: The study amalgamated findings from four focus groups and nine interviews, revealing six themes. Stakeholders had a diverse understanding of integration, associating the term mainly with collaboration, communication or cooperation. Community pharmacies were positively perceived; however, their commercial and privately owned nature was of concern. Remuneration methods for pharmacists were controversial, with a suggested shift to service-based remuneration. Information availability and barriers such as interprofessional communication gaps were highlighted. The nominal group prioritised, according to importance and feasibility, bidirectional communication development, coordination in using interprofessional protocols and community pharmacist participation in primary healthcare centre meetings as interventions for integrating community pharmacies and primary healthcare centres.

CONTACT Amaia Urionagüena amaia.urionaguena@ehu.eus Pharmacy Practice Research Group, Faculty of Pharmacy, University of the Basque Country, UPV/EHU, P. Universidad 7, 01006 Vitoria-Gasteiz, Spain

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Conclusion: Based on the opinions of stakeholders, three interventions are proposed to initiate the integration process of community pharmacy and primary care. The implementation of these interventions will need to be negotiated with the relevant authorities and evaluated.

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1. Background

Health systems are under pressure predominantly due to an increase in demand (World Health Organisation, 2022), insufficient infrastructure, the rapid development of health technology and a lack of human resources to provide quality services (European Observatory on Health Systems and Policies, 2018). Integration is defined by the World Health Organisation (WHO) (2016, p. 3) as ‘a coherent set of methods and models on the funding, administrative, organisational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors’. WHO (2021, p. 5) highlights the need for ‘supportive and agile political leadership at all levels’. For WHO (2021), working towards an integrated approach is a priority for the recovery and transformation of health systems.

Community pharmacy has not been included in the move by policymakers to integrate health systems. However, there is a trend for community pharmacy, in addition to its traditional role of dispensing medications, to be patient care oriented. According to the Pharmaceutical Group of European Union (n.d.), expanding the role of community pharmacy could be ‘key policy levers to lead the way towards a more sustainable, inclusive and healthier future in Europe’. Policymakers and health administrators are beginning to consider community pharmacies potential as a resource to support primary care, due to the rapid evolution of the expansion of pharmacists’ roles, proximity, and accessibility to the population (Goundrey-Smith, 2018; World Health Organisation, 2019). The integration of community pharmacy into the health systems could contribute to improving efficacy, quality and sustainability (Lake et al., 2020; Luli et al., 2021; Piquer-Martinez et al., 2022).

1.1. Spanish healthcare system structure

Many aspects of integration are dependent on political context, national and local organisational structure, funding and infrastructure of national healthcare systems. Spain is a decentralised country organised around 17 regionally based ‘*Comunidades Autónomas*’ and two autonomous cities. The Spanish health system is based on a public model of a National Health System financed through general taxes; and, at the national level, medicines are

authorised and registered, prices are set, and the common set of health services to which the entire population is entitled to receive is defined. However, it transfers the responsibility of providing these health services to each '*Comunidad Autónoma*' (Gastelurrutia et al., 2020).

The Basque Country is one of the '*Comunidades Autónomas*' and is composed of three provinces. Between 2011 and 2014, due to a change in health policy, there was an integration of the public components of the healthcare system, creating new structures called Integrated Health Organisations (Nuño et al., 2012; Polanco et al., 2015) (Supplemental Appendix 1). However, community pharmacy, being privately owned, was not considered part of the process. There is now a recognition of the necessity of integrating community pharmacies, emphasising the importance of ensuring seamless patient care, promoting coordinated efforts across all healthcare sectors and optimising overall health outcomes for the broader community.

This research aims to explore the opinions of stakeholders on the process of integrating community pharmacy into the Basque primary healthcare system and to explore and prioritise interventions that could assist this process.

2. Methods

The study was undertaken in two phases. During the first phase, a constructivist qualitative research approach (Mills et al., 2006) was used to explore stakeholders' perceptions of the integration of community pharmacies and publicly funded primary healthcare centres. Focus groups were used to explore individual experiences in and around primary healthcare centres (micro level) and possible interventions for the integration process. Semi-structured interviews were undertaken with stakeholders, focused on the organisational aspects at a provincial level (meso level) and at the highest level of the system (macro level), where policy, resources and governance issues are determined (Urionagüena et al., 2023). The fieldwork was conducted from December 2022 to April 2023.

In the second phase, once opinions were gathered and potential interventions identified, a modified virtual nominal group technique (Varga-Atkins et al., 2017) was conducted to reach consensus on the interventions by scoring them based on their importance and feasibility.

3. Phase 1

Purposive sampling (Manera et al., 2019) was used by the management of the Integrated Health Organisations to select primary care providers (micro level) based on availability and heterogeneity. Community pharmacists were identified by the Official Pharmacists Association of each province, based on the proximity to the Integrated Health Organisations.

An invitation letter and the consent form were sent to all participants by email (34 at the micro level and 9 at the meso and macro levels) for the focus groups and interviews.

3.1. Micro level (focus groups)

Four focus groups were conducted in the three provinces of the Basque Country until saturation was reached. A guide was used to conduct each focus group (Supplemental Appendix 3). The participants' profiles are listed in Supplemental Appendix 2.

3.2. Meso and macro levels (semi-structured interviews)

At the meso level, five directors of Integrated Health Organisations and leaders of professional associations were interviewed. At the macro level, four directors of the Basque healthcare system were interviewed. A structured guide for semi-structured interviews was used (Supplemental Appendix 4). The participants' profiles are listed in Supplemental Appendix 2.

4. Phase 2

For the nominal group, all of the participants from phase 1 were invited to continue in the study. Eight people agreed, six at the micro level and two at the meso level, forming the expert group. The nominal group methodology is provided in Supplemental Appendix 5 with the participants listed in Supplemental Appendix 2.

4.1. Data analysis

All participants were assigned codes (Supplemental Appendix 2). The meetings were recorded and transcribed. The thematic analysis using NVivo® (Allsop et al., 2022) was undertaken using the classic six phases described by Braun and Clarke (2006; 2012). To ensure the credibility of the results (i.e. equivalent to internal validity in positivism), member checking was used by returning data, interpretations and results to study participants. Reflexivity was undertaken through effective record-keeping of beliefs, perceptions and decisions made by the researchers, in order to ensure dependability (i.e. equivalent to reliability in a positivist paradigm) (Amin et al., 2020). Standards for Reporting Qualitative Research (SRQR) (O'Brien et al., 2014) have been followed.

4.2. Ethical issues

The protocol was approved by the Drug Research Ethics Committee from the Basque Country (CEIm-E) (Basque Government Health Department, n.d.) in August 2022, Ref. number: PI2022107.

5. Results

The information obtained from four focus groups and the nine semi-structured interviews is reported in an amalgamated form since similar ideas emerged. Six themes emerged from the analysis.

5.1. Integration term

The concept of integration as it is applied to community pharmacy and primary care was not well understood by some of the participants. The public–private dichotomy seemed to be incompatible with the concept of integration. Participants associated ‘integration’ with collaboration, cooperation or coordination.

I don’t know exactly what you mean when you use the word integration ...
(GPP_FG1)

... I see integration a little far from what can be achieved. We can say collaboration, cooperation, improve coordination, improve communication, but integration ... (GPP_FG3)

The underlying view among all participants was that, regardless of the term, it is necessary for community pharmacy and primary care to work in a more collaborative, coordinated way and with interprofessional communication.

... we (Basque healthcare system providers and community pharmacists) (...) we must explore the possibility, because so much has changed in recent years that I believe that we have to explore new ways of working together and collaboration. (Interview 6, meso level)

5.2. Community pharmacy perception

There was a general positive perception of community pharmacy. Trust between the patient and the pharmacist was identified as one of the points that the health system could take advantage.

... there are pharmacies that are very involved in their neighbourhoods, they do a lot of community work, they know the neighbours, they supply their medication, they solve their problems ... (PCN2_FG2)

However, the private ownership of pharmacies leads to a view by many stakeholders that pharmacy is a retail business, dealing with many non-health related products. The public nature of the health system in Spain, in contrast to the private nature of community pharmacy, was identified as an important barrier to integration.

... I have the perception when I have entered one (community pharmacy) of it being a commercial business that is there more emphasised on other products, which are not medications or health products. (A_FG1)

Participants also mentioned that sometimes there is no connection between the activities of community pharmacies and the healthcare system, e.g. in running health campaigns.

...I believe that there could be greater coordination particularly in public health campaigns. On the other hand, my experience is that as they are a private business, well, many times do not wish to participate ... (Interview 2, meso level)

In contrast, the accessibility of the pharmacy was highlighted as strength. They indicated that accessibility means that patients interact with pharmacies more often than go to the healthcare centres. Many agree that community pharmacies can be a resource that the healthcare system should utilise, particularly, in the current context in which the primary care system is overloaded.

... (Community Pharmacy) is a critical player because it is very close to the public, contact is very easy and people go to the pharmacy a lot and so it would be very good to have that option ... (GP1_FG2)

... the community pharmacy is a first line health agent (...) because it is in the community where the patients' live (...) and when they have a problem, they try to get it resolved close to their home, (...) and in (the community pharmacy) they do not need an appointment ... (GP1_FG4)

5.3. Community pharmacists remuneration

Pharmacy remuneration was a controversial issue. Stakeholders from the micro level suggested that a change in the form of remuneration for pharmacists could help bring greater closeness between both groups of professionals. However, stakeholders at the meso and macro levels perceived it as difficult to change the pharmacy remuneration system because of political tensions.

... if we were remunerated in another way, not per medication sold, but per act of dispensing or per problem solved, it would surely be much easier for us to work collaboratively ... (CP1_FG1)

... there are a series of political interests, etc., that are going to go against everything that they interpret as a movement towards privatisation of the health care system. Publicly there is a difficulty in this position ... (Interview 3, meso level)

5.4. Information availability

Within this domain, there were two subthemes; lack of clarity of the roles and activities performed by community pharmacy and primary care and the lack of availability and exchange of information. Several solutions were proposed.

... I don't know, I have no idea what you (primary care providers) are doing, what protocols do you have? (CP2_FG1)

... there are certain activities that can simply be coordinate and aligned, perhaps through meetings, email, this sort of things could be worked on ... (CP1_FG1)

On the other hand, the availability and access of information to each professional group, including the possibility of community pharmacist's accessing medical record information, produced divergent views. Some participants rejected the idea of allowing such access to community pharmacists due to the sensitivity and confidentiality of the data. However, others agreed with providing access to facilitate the work of pharmacists.

... that is getting into personal privacy ... I don't think that should occur (...) You (the community pharmacists) would not be subject to the same confidentiality processes as us. (GP_FG1)

No access to the medical record under any circumstances, and they (pharmacists) already have access to the pharmacotherapeutic history (...) I should not give my patients diagnoses to the pharmacist. (Interview 9, macro level)

However, there appears to be consensus regarding access to 'alerts', e.g. allergies, that help to contextualise the medicine that has been prescribed.

... Perhaps they (pharmacists) can have access to see the alerts we have, like allergies, a patient with many conditions, patient with COPD (Chronic Obstructive Pulmonary Disease) ... (GP1_FG2)

5.5. Barriers

Apart from the public versus private nature of community pharmacy, the most mentioned barrier was the lack of interprofessional communication. It appears that currently communication usually occurs through the patient.

... many times, we (community pharmacists and primary care providers) use the patient as the intermediary (...) having the person as a vehicle and it seem like we are working in a different universe. This does not seem very appropriate to me (...) would seem to me a good idea to have a communication system ... (Interview 6, meso level)

Another barrier was the lack of mutual understanding of their professional roles and not knowing each other.

I think we must know what each one does, what each one's role is and what each one of us is responsible for or what we are willing to do. But first we need to get to know each other. (PCN2_FG3)

Using different organisational information technology tools was also highlighted. Primary care providers and community pharmacists have diverse prescribing and dispensing software systems. Participants all agreed that 'it doesn't make sense' to use different software.

Finally, at a macro level, the lack of willingness of community pharmacies to participate in healthcare programmes or campaigns was perceived as a barrier.

... finding out how many pharmacies were willing to participate in adherence and monitoring, the resulting figure of 30% was interesting ... It will see how many of these pharmacies will participate in these programs (...) if we want the programs to be universal, then 30% doesn't suite us, because there will disadvantage the population that do not have access to the service ... (Interview 4, macro level)

5.6. Solution proposals to advance integration

Meetings between primary healthcare centres and community pharmacies were proposed as a solution to overcome the misconceptions associated with the public and private nature of the systems, the lack of knowing each other, and an understanding of the roles and activities of each professional.

... perhaps, meetings, these types of forums to improve communication, get to know each other better and establish more direct channels of communication (...) and it would not be difficult to organise meetings with health centres professionals and community pharmacies professionals (GPP_FG3)

... I think it would be good to have direct contact, because putting face to face is very good, when you want to work together ... (Interview 9, macro level)

A strategy to increase trust and collaboration between the two groups was to determine and communicate common messages to the population through interprofessional working protocols.

... if the message that is given to someone who comes with a cold is the same in the pharmacy as it is from the health centre, then patients would have much more confidence in the system ... (GP2_FG3)

Probably the best way would be to establish common protocols: health education, minor ailments, different areas (...) start protocolising: how could the problems that arise with medications be solved? How to establish protocols for minor ailments? (...) Let's align in the messages we transmit ... (GP1_FG2)

It was also suggested to jointly carry out health promotion and disease prevention activities, such as screenings, which would assist in overcoming the lack of trust.

The limited communication between community pharmacies and the rest of the health system was the most mentioned barrier. It was highlighted that developing bidirectional communication systems would facilitate current communication, whilst also improving trust.

It was suggested that it would be beneficial if community pharmacists had access to the patient's pharmacotherapeutic record and receive alerts from the

medical record, but participants were not supportive of providing full access to the medical records themselves. The primary care providers also suggested that pharmacists could register in the medical record any private prescription medications and non-prescription medications dispensed to patients.

A stakeholder at the meso level also suggested that community pharmacists could provide medication conciliation reports after hospital discharges.

5.7. Nominal group

The nominal group was conducted in November 2023. An initial list of eight interventions, previously identified in the focus groups and interviews (Supplemental Appendix 3), was proposed to the study participants. During

Table 1. Raw score and score taken to one hundred of interventions by importance (I) and feasibility (F) in the nominal group.

	Interventions	I	F	I (100)	F (100)
01	Development of bidirectional communication systems between community pharmacist and primary care team.	46	66	96	83
02	Use of common messages through implementation and coordination in the use of interprofessional working protocols.	36	56	75	70
03	Community pharmacist participation in primary healthcare centre meetings.	29	64	60	80
04	Jointly carry out agreed activities for health promotion and disease prevention such as screenings.	24	56	50	70
05	Authorisation for access to the Medical Records, to the Pharmacotherapeutic Record, and/or to 'alerts' used by GPs.	22	28	46	35
06	Development of medicines conciliation reports including hospital discharges medications by community pharmacies.	11	28	23	35

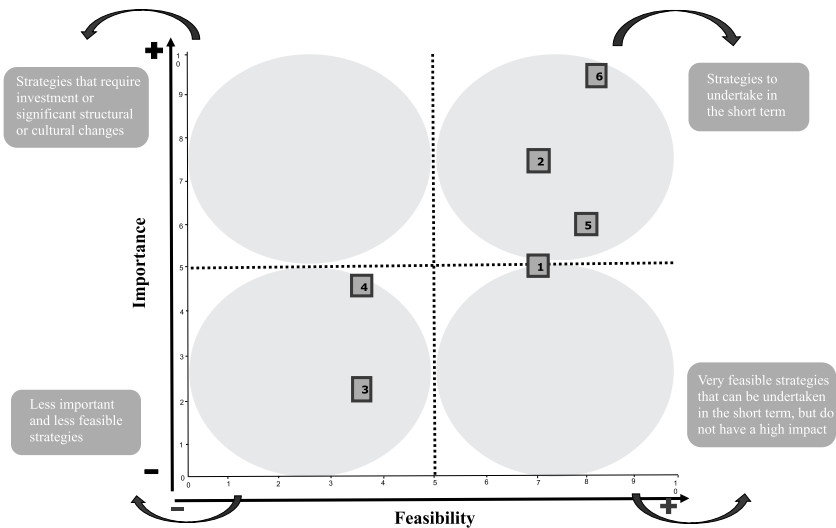


Figure 1. Priority matrix for interventions.

the initial phase of the nominal group and due to their similarity, participants decided to combine some of the initially suggested interventions, generating a final list of six interventions to be prioritised (Table 1).

A priority matrix was constructed based on the voting results (Figure 1).

Participants, despite their different profiles, reached a consensus that the intervention ‘development of bidirectional communication circuits’ was the most important and most feasible, whilst ‘community pharmacists’ participation in primary healthcare center meetings’ and ‘using common messages through implementation and coordination in the use of interprofessional working protocols’ were also identified to be incorporated in an integration process in the short term.

6. Discussion

This study appears to be novel in addressing the process by which community pharmacy can be integrated into primary care. However, there are multiple studies that concentrate on a single component of integration models such as collaboration and coordination (Bardet et al., 2015; Chong et al., 2023) or on the integration of general medical practitioners and pharmacists that are co-located in primary care sites (Hayhoe et al., 2019). Interestingly, in an international series of 17 country-specific articles (Benrimoj & Fernandez-Llimos, 2020) on the integration of community pharmacy in primary care, there were no systems or processes of integration described.

During the study, there were various interpretations and definitions of the term ‘integration’ paralleling our findings in the literature (Armitage et al., 2009), reaffirming the complexity and misunderstanding of the term.

The participants identified challenges in integrating a private ‘business’ with a public system, even if in the legislation in Spain designates pharmacies as business of ‘public interest’. However, public–private integration processes remain possible (Sekhri et al., 2011) as integration represents the extent to which functions and activities can be appropriately managed across operating units regardless of their nature (Gillies et al., 1993). Various types (Urionagüena et al., 2023) and models (Evans et al., 2013) of integration are described in the literature, which would aid in an appropriate choice. In our study (Urionagüena et al., 2023), it seemed necessary to initiate integration with small local programmes at a micro level with previous approval from the meso and macro levels. It would probably allow us to improve aspects such as shared culture, definition of roles, and aligning vision, values and goals.

Accessibility and trust that patients have in community pharmacies have been highlighted as a strength and resource for primary care. In contrast, the misinformation and the lack of knowledge and coordination that exists between both teams’ members needs to be addressed. For integration to succeed, it is important for all team members to be aware and acknowledge

their respective roles, competencies and responsibilities to improve system performance and to create an interprofessional trust (Babiker et al., 2014), components that modulate the intensity of integration (Piquer-Martinez et al., 2022; Urionagüena et al., 2023). On a practical level, it was suggested this could be achieved through meetings and sharing action protocols.

During the study, several barriers were identified that may explain why community pharmacy has not been considered as part of the previously instigated integration initiatives. Despite the public–private nature barrier of the healthcare system and community pharmacy, mentioned in previous studies (Lake et al., 2020; Nolte & McKee, 2008), more significant and urgent barriers have been identified, such as the lack of mutual knowledge and the lack of communication repeatedly mentioned during the focus groups. These are determinants to relationship building and trust, both essential to overcome negative perceptions of community pharmacy and build cultural integration (Hussain & Babar, 2023). To overcome these barriers, the proposal of an e-communication tool could be an effective solution.

There must also be a connection between the activities of community pharmacy and primary care, to allow overcoming the vision of pharmacists as shopkeepers. This vision of community pharmacy as a business can be a major challenge, particularly in allowing community pharmacists to access patients' medical records. Stakeholders expressed disagreements in this regard but was acknowledged that the patient's own their medical records, so the final decision rests with individual patients.

Stakeholders proposed the possibility of changing the method of remuneration for community pharmacy to overcome their perceptions about community pharmacy as a business. As in most countries in Europe (Hindi et al., 2019; Hussain & Babar, 2023), the community pharmacy remuneration system in Spain is based on a dispensing margin of medicines or devices, which reinforces the vision of the pharmacist as a shopkeeper. Moving from a fee per medication sold to payment for service provision or performance based may assist in changing that vision.

Some macro-level participants also pointed out the lack of willingness of community pharmacies to participate in health promotion activities or health campaigns. Official Pharmacists Associations could promote and underline the importance of these campaigns to their members. Collaboration in achieving mutual objectives is an important component for integrating systems in a sustainable manner (Green & Johnson, 2015; Piquer-Martinez et al., 2022). It is apparent work needs to be undertaken so that there are complementary roles, sharing responsibilities and joint problem-solving and decision-making in patient care (O'Daniel & Rosenstein, 2008).

Finally, this study attempted to elicit interventions using a nominal group. The nominal group from a selection of six identified three interventions as important and feasible that could be used to initiate the integration

process: ‘development of bidirectional communication circuits’, ‘community pharmacy participation in primary healthcare centre meetings’ and ‘using of common messages through implementation and coordination in the use of interprofessional working protocols’. The other three interventions were, in the participants’ opinion, less important (as they did not believe that they would promote integration as much) and less feasible (as they were not achievable in the short term).

6.1. Limitations

Qualitative research methods provide valuable insights and rich data that can be used to develop theories and hypotheses. For this specific context, the selection of stakeholders was undertaken by the management staff of the Integrated Health Organisations of Osakidetza (Basque healthcare system), so the sampling was not under the control of the research team. However, management staff were aware of the health professionals’ profiles and had a greater recruitment capacity, so with the guidance provided to them, it resulted in a heterogeneous group of participants that reflected the diversity of the healthcare system staff in a more effective way. However, the findings are context-specific, so cannot be generalised to other locations.

Nominal groups are useful to obtain consensus and increase rationality in the face of a problem. However, the process may appear to be too mechanical. For this study, the nominal group was made up of volunteers from among the participants of the focus groups and interviews. A heterogeneous group of micro and meso staff profiles were involved. The methodology used for the virtual modality was supported by the literature (Khurshid et al., 2023; Mason et al., 2021).

7. Conclusions

This study highlighted the opportunity and suggested interventions to align the activities of community pharmacy and primary care. It reported a broad range of experiences and opinions from a variety of healthcare professionals across the three levels of the health system, and also, three initial interventions were proposed for an integration plan for what is expected to be a long and complex process of integration.

Integration should ideally commence with specific interventions to encourage community pharmacy and primary care professionals to interact. Involving pharmacists in local healthcare centre’s meetings, facilitating communication and sharing clinical protocols will advance the four key constructs of integration: connectivity, communication, consensus and trust. Establishing interprofessional relationships based on trust would be essential to initiate the integration.

Implementing the three prioritised interventions will have to be negotiated with the relevant authorities. Once approved, their feasibility should be evaluated.

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Ethics approval and consent to practice

The protocol was approved by the Drug Research Ethics Committee from the Basque Country (CEIm-E) in August 2022, Ref. number: PI2022107.

The participants all signed the informed consent form before participating in the project.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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ORCID

Amaia Urionagüena  <http://orcid.org/0000-0001-8620-4167>

Celia Piquer-Martinez  <http://orcid.org/0000-0003-4965-1464>

Shalom Isaac Benrimoj  <http://orcid.org/0000-0001-9768-7838>

Victoria Garcia-Cardenas  <http://orcid.org/0000-0003-3770-4557>

Miguel Angel Gastelurrutia  <http://orcid.org/0000-0003-1019-0234>

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