

## Curricular co-design as a challenge in health sciences postgraduate programs

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**Abstract.** This paper presents the challenges, questions, and agreements that arise during the co-design of curricula for postgraduate specializations in health sciences, associated with residency programs developed in healthcare settings. In our institutional context – a university institute strategically allied with a highly complex hospital – this task is executed through dialogue and collaborative construction involving professionals from various health specialties and experts from the pedagogical field. This article delves into the challenge of designing curricula for medical postgraduate programs in our university institute that accurately and transparently reflect the formative experiences gained through in-service training and residency programs at the hospital. It explores questions emerging from interactions among diverse stakeholders and examines the agreements reached, which serve as guiding principles and criteria for curricular design in these programs. These principles aim to facilitate a more coherent and distinct alignment across each program, embracing innovative and high-quality curricular trends such as integration, the centralization of professional practices, and the incorporation of Entrustable Professional Activities (EPAs).

**Palabras clave:** Postgraduate studies, In-service learning, curriculum design, curriculum integration,

### 1. Introduction

This paper examines the challenges that arise during the co-design of curricula for specialized postgraduate programs in health-related professions within healthcare services. It addresses the need for coherence between in-service training programs and the curricula of the associated careers.

In Argentina, regulations stipulate that specialization postgraduate careers in the health sciences sector must include a minimum workload of 1760 hours per year, with a minimum duration of three years for basic programs and two years for post-basic ones, encompassing 80% practical activities. These standards are attainable when the university institution offering the career is affiliated with healthcare institutions.

Our University Institute, established within a hospital, oversees 49 residencies and over 180 in-service training programs in subspecialties, which are being transformed into accredited postgraduate degrees. This milestone has already

been accomplished with 30 programs, and there are plans to extend this to an additional 50 programs in the near future.

The development of these specialized careers entails a collaborative process involving disciplinary experts, often with postgraduate education backgrounds, as well as professionals in the field of education.

## **2. Theoretical Framework**

University curriculum design is understood as a technical-political process in which a diverse range of actors participate (Tornese, 2022). The agreements reached among these actors provide us with certain foundations for approaching the design tasks. These foundations tend to be stressed by the institutional context, the transversal dialogue and the viability of each initiative.

In professional training, it is imperative that each student's learning translates into practical application, as mere declarative knowledge is insufficient (Camilloni, 2016). Competence-based education positions the professional skills that students are expected to acquire upon graduation as the guiding principle of the curriculum (Ten Cate, 2022; Durante et al., 2022). This approach needs contemplating a curricular progression that facilitates the acquisition of skills and knowledge, which manifest as intricate modes of action that draw upon diverse resources in different contexts.

Central to the training of professionals capable of comprehending and addressing challenges requiring the integration of multiple disciplines (Díaz Barriga, 2020), particularly in the realm of health professions, is the principle of curricular integration. Notably, there is a trend to structure the curriculum around Entrustable Professional Activities (EPAs). EPAs serve as specific task descriptors that a healthcare professional assumes, demanding the application of a set of competencies. The curriculum of each training program is thus dedicated to progressively attaining proficiency in these professional activities (Ten Cate, 2022; Durante et al., 2022). Guiding the definition of objectives, practices, and assessment criteria, EPAs provide a means to visualize the levels of autonomy attained by individual students and ensure that they execute their tasks safely.

In this context, the pronounced trend of organizing the curriculum around trusted professional activities becomes evident. These activities represent specific tasks that healthcare professionals undertake, necessitating the application of a distinct set of competencies. Consequently, each training program is committed to ensuring the incremental mastery of these professional activities (Ten Cate, 2022; Durante et al., 2022). EPAs steer the formulation of objectives, practices, and evaluation criteria, enabling the visualization of the autonomy levels attained by each student and ensuring that they conduct their tasks with patient safety as a priority.

### **3. Methods**

This paper presents a selection of advancements within the institutional process focused on formulating criteria for the contextual and collaborative design of curricula tailored to in-service training programs within healthcare environments. Throughout this process, we pinpoint emerging issues, notable accomplishments, and novel challenges.

Designing curricula for these specific career paths inherently prompts inquiries into how to effectively encompass the nuances of practical settings within the prescribed curricular framework for each career. This task must be accomplished while remaining aligned with the institution's mission and the anticipated professional profile. Several of these questions include: How can a postgraduate specialization program be structured based on an ongoing service-learning journey? To what extent do the rotations within the residency or in-service learning program align with the curricular units of each postgraduate program? What will be the impacts of incorporating Entrustable Professional Activities (EPAs) on the format of curricular organization? Can the healthcare settings where students undergo rotations be considered as suitable reference units for integrating content? Additionally, what other factors warrant consideration in the formulation of curricular units?

### **4. Results**

From the discussions, a consensus has emerged regarding the design of careers that encapsulate the intricacies of professional practice training:

1. The graduation profile should encompass both the specificities of the health specialty and the institutional vision.
2. Learning objectives should be formulated in terms of professional activities that necessitate the integration of the roles delineated in CanMEDS, contingent upon the activity and context.
3. There is a perceived need to progressively incorporate the EPA-based design approach. Initially, this can be made evident through evaluation instruments that provide insights into the attained level of autonomy.
4. To achieve optimal curricular integration, the synergy between theory and practice must be considered across all activities.
5. General objectives should be established for each year, accompanied by specific objectives tailored to the rotational fields. In cases where EPAs are employed, these objectives should contribute to their fulfillment.
6. The denominations of each curricular unit should not be defined solely by the scope of practice; rather, they should mirror the practices acquired within each respective environment.

### **5. Discussion**

These consensuses enable the formulation of curricula for postgraduate specialization courses, embedding institutional characteristics. However, even though these objectives are highly desirable, achieving them in their entirety is often challenging.

This is due to several factors, such as participants in the training programs undertaking rotations through other programs that lack coordination, varying focuses within healthcare service management, or experts referencing programs developed under different frameworks. Several unresolved queries arise: What alternative configurations exist for structuring these programs? How is assessment managed within programs spanning multiple years of rotation? How can cross-cutting training paths be effectively integrated?

## 6. Conclusions

The time allocated to formulating co-design criteria holds significant importance in the realm of health-related curricular planning, particularly when undertaken collaboratively by professionals from both the healthcare and education sectors. These consensuses facilitate the creation of contextually relevant curricula. We find it valuable to share these processes and criteria with other teams engaged in the design and implementation of graduate programs within this domain.

## 7. Limitations and future research

The absence of validated EPAs by the national Ministry of Health across some specializations stands as a limitation for curriculum design. This is due to the time-consuming nature of the EPA construction processes. In forthcoming research endeavors, it becomes imperative to generate theoretical insights that expedite the formulation of EPAs for these particular specialties. Furthermore, there is a need to delve into alternative curricular organization formats for in-service training.

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