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Re-signification of the ICU as a place of technological innovation and intersubjective recognition in the COVID-19 pandemic

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Abstract *This opinion piece proposes a critical reflection on the need to redefine care pathways and establish a new praxis in Intensive Care Units (ICU), based on the concept of affect and from the intersubjective perspective of the hospitalized patient. The COVID-19 pandemic has driven a process of productive restructuring in ICU, with advances in technological resources—such as respirators and care protocols, and transformations in professional practices. At the same time, a revaluation of the subjective dimensions of care has emerged, highlighting the relationship of affecting and being affected among professionals, clients, and family members. The health crisis has highlighted the strategic role of ICU in coordinating severe and critical cases and the need to incorporate affect and intersubjectivity as fundamental dimensions of clinical management, demanding a practice with greater cognitive, technical, and ethical depth.*
Key words *Intensive Care Unit, Critical Care, Affection, COVID-19*

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Introduction

The COVID-19 pandemic required a profound reconfiguration in the ways we care for health, especially in spaces with high technological density, such as Intensive Care Units (ICU). These services and their teams dealt with significant challenges that required fast and comprehensive changes in the lines of care and professional practices. In this context of global sanitary crisis, riddled with uncertainty, resource scarcity and collective suffering, innovation emerged that challenged the purely technical logic of intensive care.

The restructuring of ICUs during the pandemic involved not only technological advancement, but also the introduction of high-flow ventilation devices, the broad use of Continuous Positive Airway Pressure (CPAP), and the reformulation of clinical and health care protocols. These changes showed how urgent it is to integrate assistance into dimensions that are often neglected: subjectivity, sensible communication, and the humanization of care. The interaction between professionals and users, often mediated by technological and symbolic obstacles, showed the centrality of affection as an element that structures praxis that goes beyond the application of techniques, promoting bonds and recognizing alterity in the context of acute suffering.

This opinion article aims to produce a critical reflection regarding how the pandemic was responsible for a resignification of ICUs not only as spaces for technological innovation, but also as places of intersubjective recognition and reinvention of care. Based on social and human health sciences and the concept of affection, this text aims to answer the following question: How do experiences in the ICU during the pandemic provoked changes in clinical practices, the subjectivity of workers, and in the relationships between technology and care? By articulating the domains of collective health, philosophy of care, and critical praxis, we aim to help strengthen approaches that combine technological density, effectiveness, and ethical sensibilities in what has become known as integral care.

ICU in the context of the pandemic: between technique and subjectivity

For more than four decades, Primary Health Care (PHC), as proposed in the Declaration of Alma Ata (1978), has been responsible for developing, adapting and disseminating technologies and important lessons, with the goal of ensuring that everyone has access to quality health, especially in more vulnerable territories (peripheries of large urban centers, rural and remote centers, among others) and in families or communities in different situations of risk and vulnerability.

In the last few decades, PHC has taken on a strategic role, in an attempt to become a coordinator of care and organizer of the Health Care Network (HCN), including service units, to ensure that they would be the first point of contact between the clients and the team, in order to build effective, affective, interpersonal, and intersubjective bonds, to promote equity and ensure the universal right to health, which is the objective of the Single Health System (SUS)[1-3].

As the COVID-19 pandemic advanced, the PHC showed its important role in places where its presence is strong, taking part in the active search, identification, and monitoring of any diseased persons with respiratory symptoms. By providing fast notifications, monitoring cases, and conducting the clinical handling of mild and moderate cases in their own health region, they helped damage control and avoided worse clinical scenarios[4].

On the other hand, in places where the PHC presence was weak, and even as a result of the natural evolution of COVID-19, severe cases were referred to more complex levels of care. This led to the excessive use of health services and their capacity to provide attention, leading to overloads in small and regional hospitals, including high complexity hospitals and their ICU beds. The latter, organized to answer the COVID-19 demands, already existed or, in some cases, were implanted or hired as an emergency measure, according to contingency plans, to conduct specialized clinical care, providing more professional and technological support to severe or critical cases, especially concerning the need for ventilators.

The ICU ended up mapping a local, regional, state, and even national rhizomatic network, to welcome clients in severe or critical conditions, sent/authorized through regulatory bodies or spontaneous demand. In extreme cases, where regulation did not authorize opening more vacancies, or when the risk of death was imminent or the place could not attend the high demands of oxygen therapy, the Urgent Mobile Care Service (SAMU) was activated, to deal with this "no vacancy" system.

Although most of those infected by the SARS-CoV-2 (new coronavirus/COVID-19) did not require hospitalization, estimates from

the beginning of the pandemic indicated that 5% of cases could demand specialized care in the ICU, while 2.3% would need mechanical ventilation[5,6]. The demand for ICU was firstly observed in a descriptive study carried out with the 99 first cases in Wuhan, China, in which 23% of people required intensive care and 4% required invasive mechanical ventilation[7].

In Brazil, one of the first actions carried out was an estimate of the number of ICU beds necessary to receive severe COVID-19 cases, considering the progress of the epidemic over time[8]. This estimate became one of the main concerns of federal entities, especially in the municipal and state levels, leading to the creation of a "single line" for public and private beds, coordinated by SUS managers. This measure aimed to optimize the use of beds and pulmonary ventilators, while ensuring the availability of equipment, strategic supplies, high-cost drugs, and professionals trained to manage clinical cases[9,10]. The centralization of decisions on the allocation of ICU beds was an efficient logistic solution[11], attending to the need to optimize and rationalize the available resources (Figure 1).

Affection as a critical category of care

With the advancement of COVID-19, ICUs, which have always been ultra-specialized centers, had to assume a role similar to that of the PHC in the coordination of care and in the organization of the HCN, due to the high demand for beds and the need to access ventilators, in addition to a high need for oxygen and even intubations, not to mention resolutive, effective, and efficient intensive care. To do so, organizational, managerial, and health care arrangements had to be made to give new meaning to the flow and profile of these therapeutic units.

Health care arrangements ICUs have contributed to the adoption of a new practice, which incorporates elements that are similar to the principles of PHC, as defined by Bárbara Starfield[12]. These principles have required professionals and intensive care teams to get closer to the diseased and their families, forming bonds that can last for longer or shorter periods due to the longitudinal care, especially in intubations and severe and critical cases.

From a technical standpoint, the coordination of care is essential, as it involves case and clinical management, associated with integral care focused on the needs of each hospitalized patient. Furthermore, an internal health care support network must be developed, in addition to a holistic and empathetic approach. New ways of interaction were also implemented, such as the use of digital media to conduct video calls via WhatsApp®. During the COVID-19 pandemic, the change in the models of approaching and focusing on the family[12], by using communication technology during the therapeutic process of their loved one, became a reality, as visits were forbidden in hospitals, to avoid the risk of infection.

That which was already a *sine qua non* condition of the productive process of ICU teamwork came to institute or even be instituted, intense, with a significant production of meaning, assimilating new technology and increasing sanitary accountability. This new creative mod-

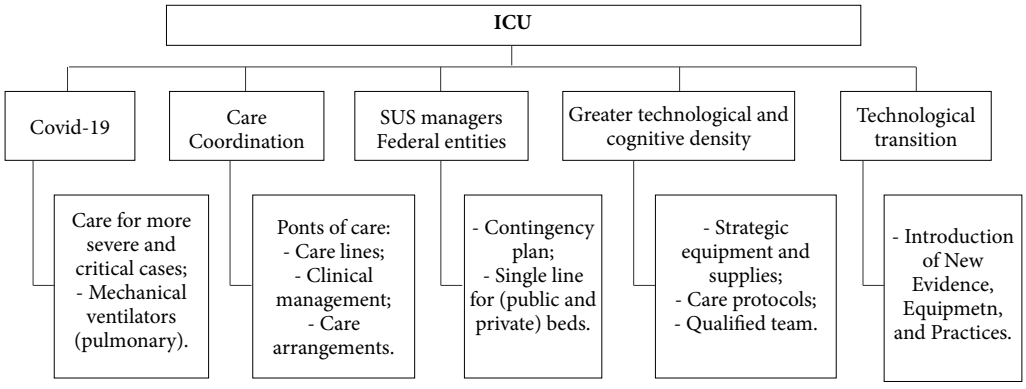


Figure 1. Organization of the ICUs in the pandemic era.

Source: Authors.

el, generated by necessity, created surrounding areas of care that brought together the individual clinical treatment of each case, in addition to interprofessional work.

ICUs, in the organization of the HCN, moved from their traditional role to become veritable health care "wombs". These spaces started to gestate their own care, embracing severe or critical COVID-19 cases, providing clinical and human care, in addition to support to the families. In this context, ICUs were deconstructed as environments marked by a rigid social, technical, political, and sexual division of labor, which were previously aimed at reproducing health rationalities through its technological and pharmacological care arsenals. In the pandemic, they had to take on an interprofessional and intersubjective model in the hospital center, where not only lives were saved, but also "gestated", through work processes whose meaning was transformed.

During the COVID-19 pandemic, ICUs were reinvented, becoming central spaces in the hospital context. More than simply saving lives or dealing with losses, these units marked the beginning of a new age of subjective and affective care, transforming health care practices and creating a mode adapted to contextual challenges. Traditionally seen as a "*locus* of grief", where human drama intensifies—the threshold between life and death, pain and the possibility of a rebirth—, ICUs overcame their historical roles and came to symbolize rebirth and the recovery of lives in a post-pandemic world.

It is worth remembering that, in the ICU, bodies "with"[13] or "without organs"[13] carry with them the subjectivity and the disease of the " becoming". Desires are pulsating, wishes overwhelming, historicity itself, in its most complete symbolism of affection, connection, potentiality and feeling, is intense. Affect (*affectus* or *adfectus*), a term used by Baruch (Benedictus) Spinoza in Books II and III of Ethics, has two meanings: *affectio* (affection/modification) and *affectus* (affect)[14], which involve feelings, relations, or even a state of mind or of the soul (joy or sadness; pleasure or pain), thereby uniting body and mind.

The idea of affection in Deleuze[14] comes from Spinoza, who defines it as the "continuous variation of the strength of existing or the potency of acting"[14] (p.42). The fundamental affects, according to Spinoza, are happiness and sadness, with the first increasing the potency of the act, while the second decreases it. For Deleuze[14], when "the potency of the act increases or decreases, the corresponding affect is always a passion. Be it a happiness that increases the potency of the act or a sadness that decreases it, these are happy or sad passions" (p.56).

Boff[15] reminds us that, as humans are beings formed by "body and soul", they have a "spiritualized body", which, when forming the limbic brain, develops "affections, love, and care"[16] (p.47), passion and emotions.

The ICU teams during the pandemic were affected just as they affected each hospitalized person, during the process of care, as they placed themselves in a setting where the most important was to save the greatest number of lives with the little resources available. Many health workers abstained from their personal routine, such as social and family coexistence, sport, leisure, and others, sacrificing their basic human needs, such as sleep, rest, and comfort, even when facing exhaustion. Some of them compromised their mental health.

The altruism of health workers when they decided to care for the sick, making an effort "not to leave anyone behind", staying far from the coexistence with parents, children, spouses, partners, and friends, was a reality around the world, something noted and verified. Their abnegation was to care for those "affected by COVID-19, who were weak and could barely breathe, to be with them and give them courage and a willingness to overcome"[17] (p.90).

Most of these professionals started to use their entire affective and technological arsenal, their clinical, epidemiological, and intersubjective arsenal, to resist and overcome the exhaustion brought about by work overload, exposure to risks, to health issues, to disease, even as they were afraid and went through substantial mental suffering. They also started to use, as strategies to increase the potency of spirituality, the signs of faith and hope, to recover and rehabilitate severe cases and keep themselves firm, considering daily adversities and exhaustion.

With the daily experience of the pandemic, affects reclaimed a central place in care, after decades in which many care models reiterated specialty, focused on mechanicism, biologicism, and individualism, as the cure of the client was projected on the insignificance of the numbers in the signs at the beds, the nursing services and medical records, without ever including the client as the subject of their own process of well-being. This is the so called "hospital centrism", which contributes to dehumanizing and vitiating relationships[18]. During the pandemic, the "Patient in Unit 7", as indicated by signs, gained

a name, a clinical condition, a phone number, so the physician and other professionals could share his clinical situation and prognosis with his family.

This historical process of subjective resignification of the ICU seems to go through different moments, according to the terminological classification of Deleuze and Guattari[19]: territorialization—the ICU as a space of the production of practice; deterritorialization –dislodging the identity of the client, constant changing of teams at each shift, the semiotics of their combination; and reterritorialization—the significant reconstruction of a new scope of practices of care for a body "with" or "without organs". The bed became a space for building knowledge, for the resignification of practices and protocols and intersubjective social relationships, a process in which the pandemic had an important role.

The ICU became a space for the intersubjective construction of relationships between the clients and health professionals with their technique, their knowledge, and between health professionals and family, like never before. Deleuze[16], in his work "Critics and Clinic", states that "in each body infinite relationships are composed and decomposed, in such a way that the body, in turn, penetrates a larger body, under a new relationship composed or, in opposition, brings to light the smaller bodies under the relationships that compose it" (p.160). For Boff[17] (p.84), contemporary anthropology proposes a "concept of body that is more complex and holistic" (Figure 2). It can be said that no one gets sick only in the body or heals only the body; human beings are entirely body-soul-environment-beliefs and affects.

As Franco[20] states, "affects and interactions influence all bodies", generating knowledge. That which the body notices and assimilates via sensible encounters with another, that which transforms it into experiential knowledge, in turn, is translated into applicable technologies and practices.

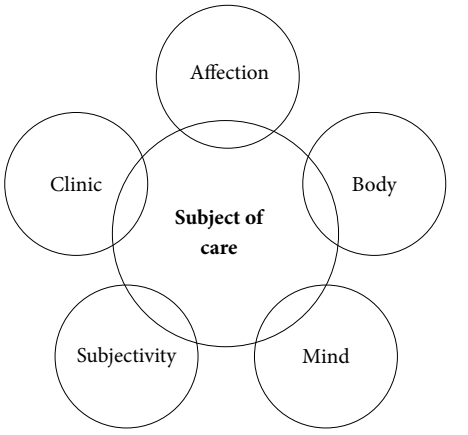


Figure 2. The subject and the production of care in the ICU.

Source: Authors.

The ICU between rites, affects, and affectivity

Although the ICU is a space dedicated to the production of lives, it often takes on a somber character as it marks the end of human stories. In this context, health workers start rituals that honor bodies that no longer harbor a soul, but are still charged with subjectivity. Gradually, advanced technology and scientific resources give way to ancestral practices of reverence to the body, to memory, and to the legacy thus imparted. These rituals celebrate the historicity of people, their relationships, affects, and the genealogy that is perpetuated over generations.

At this time, the rites conducted by the team no longer fit into categories such as interprofessional or interdisciplinary as much as it reflects a profound respect for another life which vanished. Around the bed, a confluence of beliefs and rituals manifests, being transmitted over history by shamans, African deities, Christian traditions, and other millenary cultures, Western or not. The ritualistic care for the body is connected to ancient practices, harking back to a time when humanity started to express its sense of civility and belonging by honoring and worshiping their dead.

In the ICU, these ceremonies go well on their way, the rectilinear folding of sheets, a subjective care in each space of the body that follows a tenuous line, albeit different from traditional semiotechnical physical exams (cephalopodal), starting with the podal extremities and traversing towards the cephalic one. The "cephalic", apex of the orthostatic pyramid, purveyor of sapience, knowledge, of the affectionate, between the lines and curves of a symbolic visage (face) and sculpted with life, is finally overlayed with the sheets, which involve them as would a shroud. The sphinx closes itself within a large pyramid.

The face, in its symbology, according to Deleuze and Guattari[14], "is a surface: traces, lines [...], it is a map" (p.35) that "digs the whole subjectivation required to traverse, constitutes the black hole of subjectivity as conscience or passion, the camera, the third eye"[14] (p.32). For the authors, the head "is understood as body, but not as face"[14] (p.35). The face "is only produced when the head is no longer part of the body, when it stops being coded by the body, when it stops having a multidimensional polyvocal code—when the body, including the head, is found uncoded and must be over-coded by something" called a face[14] (p.35).

It is from the face that "the voice comes out". The significant is reterritorialized in the face"[21], it is "always faced"[21] (p.6). This significant, in person, has a particular expression of substance: faceness. For Boff[18], the "face of the other makes indifference impossible", as it possesses "an irradiation that none can erase".

The rite does not end as the shroud is closed and they walk between corridors, bureaucracy, sectors, after the watching of an isolated familial grief, under the auspices of funereal services. One of the saddest questions from the SARS-CoV-2 pandemic era was the fact that families could not appropriately experience the health-disease-care-death process. Grief no longer behaved as itself[22] due to sanitary isolation measures. Affects, caresses, and the collective worship were delayed and transmuted into another dimension.

Therefore, in the COVID-19 pandemic more than at any other time, the loss of a loved one went beyond the coldness of statistical numbers, especially seeing as families could not experience grief and say their goodbyes to their relatives, beings whose existence carried profound meanings in their relationships, affects, passions, loves, historicity, genealogical identity, and belonging to a community.

From intersubjectivity to innovation: praxis and integral care in the ICUs in the context of the pandemic

The COVID-19 pandemic caused profound transformation in the ICUs, challenging traditional models of care and requiring innovative health care responses, sensible to the several dimensions of disease. In this setting, a legacy was consolidated that transcends technological apparatuses—such as high-flow ventilators, advanced clinical protocols, and pharmacological therapies—, valuing quotidian micro-actions that compose a more ethical, affective, and intersubjective intensive clinic.

During this period, several care trajectories were mapped, showing the emergence of new forms of subjective production of care and the centrality of the living work in action. The transformations observed included the need to reiterate practices that articulate science, technique, and sensibility, breaking with the purely technical logic of intensive care.

This inflection points to the consolidation of a clinic with a growing cognitive and technological density—driven by a readapted and innovative arsenal, while, simultaneously, more customized, relational, and subject-focused. In a context where the pandemic setting tends to endemicity, these changes signal towards a new configuration of health services, in which technoscience and humanization walk together, producing a new paradigm for intensive care.

The limits between clinic and intersubjectivity must be made compatible with the demands of the health production complex, which requires the use of evidence based on science, technology, and innovation, in addition to incorporating robust health care experiences, be them universal or local, capable or promoting patient safety, quality of life, survival, rehabilitation, palliative care, and dignified death.

Subjectivity, affects, and affectivity are present in all human actions. In the fields of medicine and nursing, however, the pandemic has shed a strong light on the need to deal with the new, the unknown, the nuisance that are new changes, making it impossible to delay. This context required building a new praxis of care, supported on signs and senses that (Figure 3), so far, were circumscribed to theories of collective health, nursing, and psychology, especially under the influence of social and human sciences.

The pandemic also brought forth a time hitherto unknown in the production and incorporation of technologies—hard, soft-hard, and soft[23], configuring an ecosystem of innovations that, simultaneously, re-updated the value of relational and ritualistic practices of care. As Boff recalls[17], moments of crisis are fertile for great dreams and utopias. The suffering experienced in the ICUs during the pandemic was not in vain: it showed paths to transform these spaces into territories for embracing, dignity, and mutual recognition.

The lessons that emerged from this period, by articulating technical innovation and relational ethics, point at the construction of an integral, plural, and humane intensive care

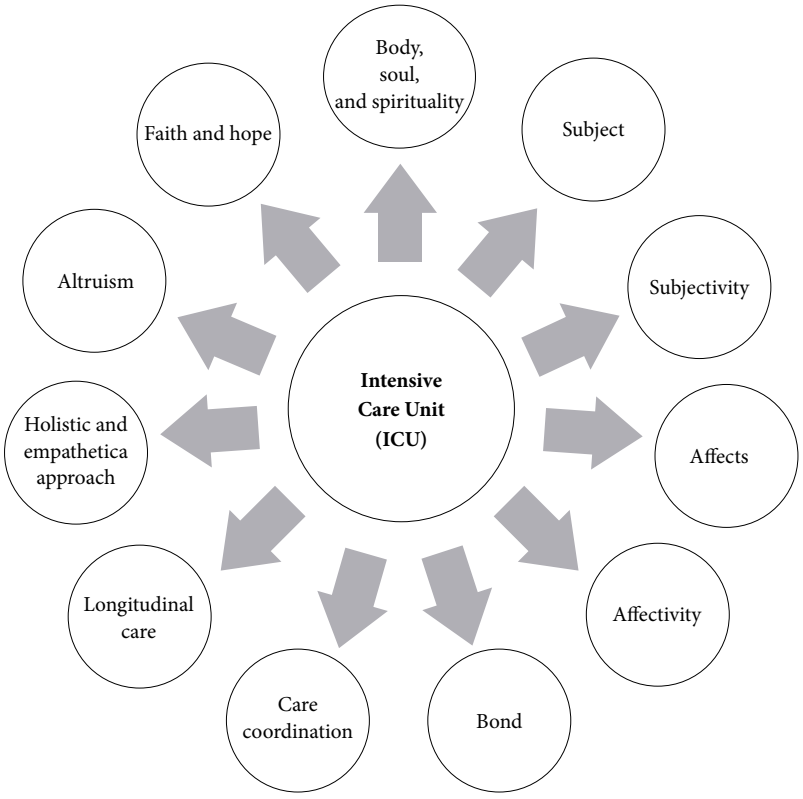


Figure 3. The signs of a new praxis in the ICU.

Source: Authors.

model—a clinic that recognizes technology as a means, not an end, and sees the future in the center of decisions and affects.

Final considerations

The COVID-19 pandemic led to the resignification of intensive care, showing that ICU innovation is not limited to technological advance, but also expresses itself in affective micro-actions, sensible listening, and intersubjective relationships. These elements challenge the traditional technicist model, pointing to an integral, ethical, and subject-focused clinic.

These experiences impose the need of policies that value soft technology, humanization of care, and the permanent formation of the teams. The SUS must recognize ICUs as territories of production of meaning, not only of survival.

Although this is a reflective text, it gives support to rethink practices and policies in the field of intensive health, inviting the improvement of a praxis that brings together science, affection, and dignity.

Collaborations

FRG Ximenes Neto and MCS Minayo were responsible for the several stages of the conception, data curation, organization, final writing, and critical review.

Data availability statement

The data sources adopted in the research are indicated in the article's body.

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