

IZAZOVI UPRAVLJANJA PROCESOM PROGRAMA DONACIJA REPRODUKTIVNIH ČELIJA U SRBIJI

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SAŽETAK

Uvod/cilj: Ova studija ispituje izazove upravljanja sistemom doniranja jajnih ćelija i sperme u Srbiji. Nedostatak lokalnih donora zahteva uvoz doniranih reproduktivnih ćelija, što zahteva koordinaciju između klinika, regulatornih agencija i međunarodnih banaka tkiva. Glavni cilj je analiza uloga i odgovornosti ključnih institucija i zainteresovanih strana u programu doniranja i istraživanje mogućnosti za poboljšanje sistema kroz kliničku harmonizaciju i analizu implementacije u klinikama za plodnost.

Metode: Deskriptivna statistika je primenjena na podatke prikupljene korišćenjem upitnika poslatog klinikama za vantelesnu oplodnju, korišćenjem RACI (engl. *Resposinble, Accoutable, Consulted, Informed*) matrice za definisanje institucionalnih uloga i sprovođenjem SWOT (engl. *Strengths, Weaknesses, Opportunities, Threats*) analize na osnovu rezultata RACI matrice.

Rezultati: RACI je filtrirao osam ključnih institucija sa njihovim dodeljenim odgovornostima. Ministarstvo zdravlja ima najveći broj informacionih odgovornosti, potvrđujući svoju vodeću, regulatornu i nadzornu ulogu u sistemu. Na osnovu obrađenog upitnika, klinički embriolozi obavljaju većinu zadataka dokumentacije, uključujući pakovanje i otpremu (47,1%) i komunikaciju sa bankama tkiva (58,8%). Većina ispitanika (41,2%) je izjavila da se greške u dokumentaciji retko dešavaju, dok su neusaglašenosti stranih banaka bile veoma retke (70,6%), a institucionalna podrška Ministarstva se smatrala ograničenom.

Zaključak: Rezultati ističu sistem sa nejasnom i ograničenom strateškom komunikacijom koristeći RACI matricu i pokazali su se korisnim u razjašnjavanju institucionalnih uloga, dok je SWOT analiza istakla i snage (stručni kapacitet) i pretnje da prekomerna centralizacija odgovornosti i izvršnih uloga može preopteretiti instituciju i usporiti procese. Buduća istraživanja treba da se fokusiraju na kvantitativne analize kliničkih ishoda vezanih za poreklo i kvalitet doniranog materijala, kao i na uporedne evaluacije komunikacije između institucija, banaka i regulatornih tela.

Ključne reči: doniranje gameta, reproduktivna medicina, RACI matrica, SWOT analiza, institucionalna koordinacija

Uvod

Kvalitet zdravstvenih usluga ima značajan uticaj na dobrobit društva, tako da kontinuirano praćenje i poboljšanje kvaliteta zdravstvene zaštite imaju globalni značaj. Primena novih tehnologija, usluga ili ideja u bolničkim sistemima i zdravstvenom sektoru ključna je za njihov dugoročni opstanak (1). Bliska saradnja između bolnica, univerziteta i regulatornih tela u zdravstvu obezbeđuje ne samo pravni okvir, već i predviđanje prepreka i brzo rešavanje nastalih problema.

Ključna razlika između definicija „regulative“ i „upravljanja“ u oblasti bankarstva leži u činjenici

da se upravljanje zasniva na savetima i smernicama u praksi. Nasuprot tome, regulativa obuhvata formalne pravne strukture koje regulišu praksu putem zakonskih regulatornih tela (2). Upravljanje procesima u programu doniranja reproduktivnih ćelija u Srbiji uključuje različite zainteresovane strane iz javnog i privatnog sektora, uključujući državne institucije i kliničke ustanove. U ovom složenom sistemu, jasno definisanje uloga i odgovornosti je od ključne važnosti, kao i uspostavljanje efikasne komunikacije između institucija. Jasno definisanje uloga i odgovornosti neophodno je kako bi se obezbedila efikasnost, zakonitost i

CHALLENGES IN MANAGING THE REPRODUCTIVE CELL DONATION PROGRAM PROCESS IN SERBIA

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SUMMARY

Introduction/Aim: This study examines the governance challenges in Serbia's egg and sperm donation system. The necessity of donors importing donated reproductive cells requires coordination among clinics, regulatory agencies, and international tissue banks. The main objective is to analyse the roles, responsibilities of key institutions and stakeholders in the donation program, exploring opportunities for system improvement through clinical alignment and analysis of implementation in Fertility clinics.

Methods: A descriptive statistical method was applied to the data collected using a questionnaire sent to IVF clinics, utilising the Resposinble, Accoutable, Consulted and Informed (RACI) matrix to define institutional roles, and conducting a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis based on the RACI matrix results.

Results: RACI analysis revealed that the Ministry of Health bears the highest number of information responsibilities, confirming its leading, regulatory, and supervisory role. Based on the questionnaire, Clinical Embryologists handle most documentation tasks, including packaging and shipping (47.1%) and communication with tissue banks (58.8%). Most respondents (41.2%) reported that documentation errors rarely occur, while non-compliances from foreign banks were very uncommon (70.6%), and the Ministry's institutional support was viewed as limited.

Conclusion: The results highlight a system with unclear and limited strategic communication, utilising the RACI matrix, which proved to be useful in clarifying institutional roles. The SWOT analysis emphasised both strengths (professional capacity) and threats, highlighting that excessive centralisation of roles can overload an institution and slow down processes. Future research should focus on quantitative analyses of clinical outcomes related to the origin and quality of donated material, as well as comparative evaluations of communication between institutions, banks and regulatory bodies.

Keywords: Gamete donation, reproductive medicine, RACI matrix, SWOT analysis, institutional coordination

Introduction

The quality of healthcare services has a significant impact on the welfare of society, making it of global importance to continually monitor and improve the quality of healthcare. Implementing new technologies, services, or ideas in hospital systems and the healthcare sector is crucial for their long-term survival (1). Close collaboration between hospitals, universities and healthcare regulatory authorities ensures not only a legal framework but also the obstacle prediction and quick resolution of all arising issues.

The key difference between the definitions

of "regulation" and "governance" in the field of banking lies in the fact that governance is based on advice and guidelines in practice. In contrast, regulation encompasses formal structures of law that regulate practice through statutory regulatory bodies (2). The management of processes in the reproductive cell donor program in Serbia involves various stakeholders from both public and private sectors, including state institutions and clinical facilities. In this complex system, it is crucial to clearly define roles and responsibilities, as well as establish effective communication between institutions. This clarity is essential for ensuring the efficiency, legali-

kvalitet pruženih usluga.

Zakonski akt o biomedicinski potpomognutoj oplodnji (BMPO) (2017) i Zakon o izvozu i uvozu ćelija čine pravni okvir koji reguliše proces uvoza i primene doniranih gameta u Srbiji (3). Sprovedenje donorskog programa BMPO u Srbiji odvija se u skladu sa nacionalnim propisima. Usklađen je sa direktivama Evropske unije (EU) i međunarodnim standardima o kvalitetu i bezbednosti tkiva i ćelija za ljudsku upotrebu (3-8). Zakon o BMPO u Srbiji zahteva da se pojedinačno izdaje dozvola za uvoz ili izvoz reproduktivnih ćelija, bez obzira da li su u pitanju sopstvene ili donirane gamete ili embrioni. Mogućnost praćenja kvaliteta ćelija i procesa ostaje odgovornost Državne banke reproduktivnih ćelija, tkiva i embriona (RĆTE). Vantelesna oplodnja (engl. *In Vitro Fertilization* - IVF) sa doniranim gametama uvedena je gotovo istovremeno sa početkom programa vantelesne oplodnje u Srbiji, 1992. godine. Program inseminacije doniranom spermom primenjivan je i ranije, tokom 80-ih godina. U oba programa, donacija je bila anonimna i altruistička, a program je ukinut 2012. godine, nakon što su doneti novi Zakon i podzakonski akti o BMPO. Program donacije je ponovo pokrenut 2022. godine, nakon distribucije ograničenog (<10) broja domaćih donora, kontinuiranim programom uvoza gameta, koji je obezbedila Državna banka reproduktivnih ćelija, tkiva i embriona u saradnji sa tri partnerske banke ćelija iz EU. Distribucija, koja uključuje uvoz i izvoz uzoraka pacijenata, takođe zahteva strogo poštovanje procedura i zakonskih regulativa datih zemalja, kao i posvećivanje pažnje doslednosti dokumentacije i pisanom pristanku pacijenta (9).

U ovoj studiji je korišćena RACI matrica dodelje odgovornosti (eng. *Responsible, Accountable, Consulted, Informed* – RACI), kako bismo pružili pregled toka procesa “naručivanje-odobrenje-uvoz-prijem”, pregled uloga i odgovornosti, analizirali efikasnost svih aktera uključenih u proces i prepoznali najčešće prepreke i izazove u Srbiji. Ova metoda je omogućila strukturiranu identifikaciju institucionalnih odgovornosti (10). Analiza je obuhvatila Ministarstvo zdravlja, Republički fond za zdravstveno osiguranje (RFZO), Banku reproduktivnih ćelija, tkiva i embriona u Srbiji, i ustanove koje se bave doniranim ljudskim reproduktivnim ćelijama (u daljem tekstu Banke oocita i sperme u EU), klinike za vantelesnu oplodnju, kao i Komisiju za procenu pacijenata i odobravanje BMPO.

Cilj ove studije bio je da se uz pomoć RACI

matrice, SWOT analize i upitnika koji su popunile klinike za plodnost (mišljenja stručnjaka) pruži strukturirani pregled odgovornosti, kao i ukupnog zadovoljstva i ocena. Takođe, cilj je bio da se identifikuju mogućnosti za poboljšanu usklađenost, saradnju i institucionalnu podršku u okviru programa doniranih ćelija u Srbiji, time doprinoseći njegovom održivom razvoju.

Metode

Ova studija preseka sprovedena je u 17 bolnica za vantelesnu oplodnju (privatnih i državnih). Prva metodologija bila je RACI matrica, koja je korišćena kao metodološki alat za mapiranje uloga i odgovornosti svih zainteresovanih strana uključenih u program doniranja reproduktivnih ćelija u Srbiji. RACI matrica je korišćena za sistematizaciju složenog institucionalnog okvira i procesa upravljanja programom za doniranje reproduktivnih ćelija u Srbiji. Analiza je bila usredsređena na osam ključnih institucija: domaće (Banka reproduktivnih ćelija i tkiva) i međunarodne banke ćelija (oocita i sperme), klinike za plodnost, Komisiju za procenu, Ministarstvo zdravlja, Republički fond za zdravstveno osiguranje i Upravu za biomedicinu. Proces dodeljivanja uloga R/A/C/I podrazumeva analizu svake identifikovane aktivnosti u okviru procesa (kao što je izdavanje dozvole za uvoz, odobravanje licence ili sprovedenje postupka VTO) kako bi se utvrdilo sledeće: R: Ko obavlja zadatak; A: Ko donosi konačnu odluku i snosi formalnu odgovornost; C: Ko mora biti konsultovan pre donošenja odluka; I: Ko mora biti obavešten o ishodima.

Da bi se obezbedila jasnoća u analizi, ako određena institucija nema ulogu u vezi sa specifičnom aktivnošću, označena je kao N (nijedna). Ovo ukazuje na svesnu odluku da se prizna da nema odgovornosti u toj oblasti. Analiza je sprovedena korišćenjem programa *Excel*, gde je svaki zadatak naveden u redu, a relevantne institucije su predstavljene u kolonama, sa odgovornostima dodeljenim prema navedenim principima. Cilj je bio da se identifikuju podela dužnosti, preklapanja i uska grla, što može pomoći u isticanju izazova u upravljanju ovim složenim procesom. SWOT analiza je razvijena na osnovu rezultata institucionalnog mapiranja koji su dobijeni uz pomoć RACI matrice.

U drugom delu korišćen je upitnik koji je dizajniran tako da prikupi povratne informacije od centara za VTO o svim fazama procesa “naručivanje-odobravanje-uvoz-prijem”, uključujući procenu kvaliteta uvezenog reproduktivnog materijala.

ty, and quality of the services provided.

The Law on Biomedically Assisted Fertilization (BMAF) (2017) and the Law on Export and Import of Cells constitute the legal framework governing the process of importing and applying donated gametes in Serbia (3). The implementation of the BMAF donor programme in Serbia adheres to national regulations. It is aligned with European Union (EU) directives and international standards on the quality and safety of tissues and cells for human use (3-8). The Serbian law of BMAF requires an individually issued permit for the import or export of reproductive cells, regardless of whether they are one's own or donated gametes or embryos. The traceability and quality of cells or processes remain the responsibility of The State Bank of Reproductive Cells and Tissues Establishment (RCTE). In Vitro Fertilisation (IVF) with donated gametes was introduced almost simultaneously with the start of the IVF program in Serbia, in 1992. Insemination program with donated semen was applied even earlier, during the 80s. In both programs, donation was anonymous and altruistic, and the program was terminated in 2012, after the new Law and bylaws on BMAF were enacted. The donation program was restarted in 2022, where, after the distribution of a limited (<10) number of domestic donors, by continuous program of gamete import, provided from the State Bank of RCTE in collaboration with three EU partner banks. Distribution, which includes importing and exporting patient specimens, also requires strictly followed procedures and regulations of the respective countries, as well as careful attention to documentation consistency and well-informed patient written consent (9).

In this study, we employ the Responsible, Accountable, Consulted, Informed (RACI) matrix to provide an overview of the "ordering-approval-import-reception" process flow, an overview of roles and responsibilities, and to analyse the efficiency of all actors involved and to recognise the most common obstacles and challenges in Serbia. This method enabled structured identification of institutional responsibilities (10). The analysis included the Ministry of Health, the Republic Health Insurance Fund (RHIF), the Serbian Bank of Reproductive Cells and Tissues and Tissue establishments dealing with donated human reproductive cells (hereinafter: Oocyte and Sperm EU banks), IVF clinics, as well as the Patients Assessment and BMAF approval committee.

This study aims to utilise the RACI matrix, SWOT

analysis, and a questionnaire completed by Fertility clinics (views of experts) to provide a structured overview of responsibilities as well as overall satisfaction and ratings. And to identify opportunities for improved alignment, collaboration, and institutional support within the donor cell programme in Serbia, thereby contributing to its sustainable development.

Methods

The cross-sectional study was conducted in 17 IVF hospitals (both public and private), and all were respondents. The first methodology was the RACI matrix, utilised as a methodological tool for mapping the roles and responsibilities of all stakeholders involved in the reproductive cell donation programme in Serbia. The RACI matrix was employed to systematise the intricate institutional framework and management processes of the reproductive cell donation programme in Serbia. This analysis focused on eight key institutions: domestic (Reproductive cell and tissue bank) and international cell banks (Oocyte and Sperm Banks), Fertility clinics, the Assessment Committee, the Ministry of Health, the Republic Fund for Health Insurance, and the Directorate of Biomedicine. The R/A/C/I role assignment process involves analysing each identified activity within the process (such as issuing an import permit, granting a licence, or conducting an IVF procedure) to determine the following: R: Who performs the task; A: Who makes the final decision or holds formal responsibility; C: Who must be consulted before decisions are made; I: Who must be informed of the outcomes.

To ensure clarity in this analysis, if a particular institution has no role related to a specific activity, it is marked as (N - None). This indicates a conscious decision to acknowledge that there is no responsibility in that area. The analysis was conducted using Excel, where each task is listed in a row, and the relevant institutions are represented in columns, with responsibilities assigned according to the noted principles. The aim is to identify the division of duties, overlaps, and bottlenecks, which can help highlight challenges in managing this complex process. The SWOT analysis was developed based on the institutional mapping results obtained through the RACI matrix.

In the second part questionnaire was designed to collect feedback from IVF centres on all stages of the "ordering-approval-import-reception" process,

Upitnik je sproveden uz pomoć elektronskog formulara koji je kreiran korišćenjem *Google Forms*. On je poslat mejlom svim učesnicima, što je omogućilo anonimne povratne informacije. Zatim su svi učesnici podsećani telefonskim putem da popune formular. Dobijeni podaci su prvo tabelarno obrađeni uz pomoć softvera *Microsoft Excel* kako bi se grupisala pitanja koja pripadaju istim dimenzijama, nakon čega je izvršena statistička analiza. Podaci su prikazani kao apsolutni brojevi i procenti. Kronbahova alfa je korišćena za procenu unutrašnje konzistentnosti.

Rezultati

U tabeli 1 prikazana je raspodela osam ključnih institucija uz pomoć RACI matrice za dodelu odgovornosti. U tabeli 2 date su uloge po njihovoj učestalosti. Ukupna zastupljenost uloga u sistemu je bila: N (nijedna, eng. *none*) – 15 puta; I (informisan, eng. *informed*) – 32 puta; R (odgovoran, eng. *responsible*) – 13 puta; A (krajnje odgovoran, eng. *accountable*) – 9 puta; C (konsultovan, eng. *consulted*) – 5 puta.

Najčešća uloga je I (informisan), sa ukupno 32 pozicije (32/74). Druga najčešća uloga je „nijedan“, koja se pojavljuje 15 puta (15/74). Uloga R (odgovoran) je dodeljena 13 puta (13/74) i predstavlja izvršnu odgovornost. Uloga A (krajnje odgovoran) je dodeljena sa niskom učestalošću, samo 9 puta (9/74). Najređe korišćena uloga je C (konsultovan), koja je dodeljena 5 puta.

Na slici 1 prikazana je proporcionalna zastupljenost pojedinačnih uloga u okviru sistema donorskog programa. Informisan (I) je najzastupljenija uloga, koja čini 43% svih uloga. Ovo ukazuje na dominantan informativni aspekt komunikacije među institucijama, kao i na potencijalnu pasivnu saradnju, gde mnoge institucije jednostavno primaju informacije bez preuzimanja odgovornosti ili direktnog delovanja.

Slika 2 ilustruje učešće pojedinačnih institucija u svim aktivnostima mapiranim u okviru RACI matrice, bez fokusiranja na specifične uloge (R, A, C, I, N).

Na osnovu primenjene RACI matrice i identifikovanih institucionalnih uloga, pripremljena je sumarna analiza, koja je predstavljena u tabeli 3 kao SWOT analiza.

Korišćenjem upitnika procenjene su uloge, iskustvo i demografske karakteristike osoblja uključenog u rukovanje medicinskom dokumentacijom i komunikaciju sa bankama reproduktivnih

ćelija i tkiva (tabela 4). Početnu pripremu dokumentacije pacijenata najčešće obavljaju medicinske sestre/tehničari (52,9%), zatim administrativno osoblje i klinički embriolozi (i jedni i drugi 17,6%). Većina osoblja je imala 6-10 godina iskustva u reproduktivnoj medicini (52,9%) i bili su starosti 35-44 godine (47,1%). Izbor i naručivanje reproduktivnih ćelija, uz blisku komunikaciju sa pacijentima, podjednako su obavljali specijalisti ginekologije i akušerstva i klinički embriolozi (po 29,4%). Osoblje je, gotovo po ulogama, imalo 10+ godina iskustva (41,2%), ravnomerno raspoređeno po starosnim grupama 35-44 godine i 45+ godina (po 35,3%). Pakovanje, verifikaciju i podnošenje seta dokumenta za odobrenje uvoza pretežno su obavljali klinički embriolozi (47,1%), a znatno manje medicinske sestre/tehničari (23,5%). Lekari nisu bili uključeni u ovu fazu procesa. Ovu ulogu su tipično obavljale osobe sa 6-10 godina iskustva (47,1%) starosti 35-44 godine (41,2%). Komunikacija sa ustanovama tkiva (domaćom i stranim partnerskim bankama) bila je pretežno odgovornost kliničkih embriologa (58,8%), a u manjoj meri ginekologa i akušera (17,6%) i administrativnog osoblja (11,8%). Slično, polovina zaposlenih u ovoj ulozi imala je 6-10 godina iskustva (47,1%) i bila je starosti između 25 i 34 godine (41,2%).

Izveštavanje o uspešnosti ovih postupaka institucijama i bankama prikazano je u tabeli 5. Metode izveštavanja o rezultatima uspešnosti postupaka bankama reproduktivnih ćelija i tkiva varirale su u zavisnosti od institucije. Za stranu partnersku banku reproduktivnih ćelija, tkiva i embriona 1, najčešći metod je bio čuvanje rezultata u okviru klinike (41,2%), zatim korišćenje elektronskog sistema za dokumentaciju (29,4%) i komunikacija putem mejla (23,5%). Kada je u pitanju strana partnerska banka reproduktivnih ćelija, tkiva i embriona 2, velika većina (88,2%) je izjavila da koristi elektronski sistem za dokumentaciju, dok je samo 11,8% koristilo mejl. Prilikom izveštavanja stranoj partnerskoj banci RČTE 3, rezultate je najčešće dostavljalo osoblje klinike (35,3%), dok su ostali odgovori uključivali mejl (23,5%), čuvanje u okviru klinike (29,4%) i sisteme elektronske dokumentacije (11,8%). Izveštavanje Ministarstvu zdravlja (Upravi za biomedicinu) sprovodilo se isključivo putem mejla u 70,6% slučajeva. U 17,6% slučajeva, korišćeno je izveštavanje mejlom i u papirnoj formi, dok su u 11,8% slučajeva rezultati čuvani samo na klinici.

Osoba odgovorna za pripremu i izveštavanje o

including an assessment of the quality of imported reproductive material. The survey was carried out using an electronic form created with Google Forms. The questionnaire was emailed to all participants, allowing for anonymous feedback. Then, all possible respondents were reminded by phone to fill out the form. The obtained data were first tabulated using Microsoft Excel software to group questions belonging to the same dimensions, after which a statistical analysis was performed. Data are reported as absolute numbers and percentages. Internal consistency was assessed by Cronbach's alpha.

Results

Table 1 shows the RACI filtered eight key institutions with their dedicated responsibilities.

Table 2 shows quantified roles by their frequency. Total representation of roles in the system: N (None) – 15 times; I (Informed) – 32 times; R (Responsible) – 13 times; A (Accountable) – 9 times; C (Consulted) – 5 times.

The most frequent role is I (Informed), with a total of 32 positions (32/74). The second most frequent role is N (None), which appears 15 times (15/74). The role R (Responsible) was assigned 13 times (13/74), and represents executive responsibility. The role A (Accountable) has been assigned with a low frequency, 9 times (9/74). The least frequently used role is C (Consulted), assigned only 5 times.

Figure 1 shows the proportional representation of individual roles within the donor program system. Informed (I) is the most prevalent role, accounting for 43% of all roles. This suggests a dominant informational aspect of communication among institutions, as well as potential passive cooperation, where many institutions simply receive information without taking responsibility or acting directly.

Figure 2 illustrates the involvement of individual institutions in all activities mapped within the RACI matrix, without focusing on specific roles (R, A, C, I, N).

Based on the implemented RACI matrix and identified institutional roles, a summarised analysis was prepared, which is presented in Table 3, representing a SWOT Analysis.

The survey assessed roles, experience, and demographic characteristics of personnel involved in handling medical documentation and communication with reproductive cell and tissue banks, Table

4. The initial preparation of patient documentation is most frequently performed by nurses/technicians (52.9%), followed by administrative staff and clinical embryologists (both 17.6%). Most performers had 6–10 years of experience in reproductive medicine (52.9%) and were between 35–44 years old (47.1%). Selection and ordering of reproductive cells, with tight communication with patients, was equally performed by obstetrics and gynaecology (OB/GYN) specialists and clinical embryologists (29.4% each). The performers, almost by role, had 10+ years of experience (41.2%), evenly distributed between the 35–44 years and 45+ years age groups (35.3% each). The packaging, verification, and submission of document sets for import approval were handled predominantly by clinical embryologists (47.1%) and significantly lower by nurses/technicians (23.5%). The doctors weren't involved in this phase of the process. This role was typically performed by individuals with 6–10 years of experience (47.1%) and aged 35–44 years (41.2%). Communication with tissue establishment (domestic and foreign partner banks) was predominantly the responsibility of clinical embryologists (58.8%), and in lower extent by OB/GYN specialists (17.6%) and administrative staff (11.8%). Similarly, half of the staff in this role had 6–10 years of experience (47.1%) and were between 25 and 34 years old (41.2%).

Reporting procedure success results to Institutions and Banks is presented in Table 5. The methods of reporting the results of procedure success to reproductive cell and tissue banks varied depending on the institution. For foreign RCTE bank partner 1, the most common method was storing the results within the clinic (41.2%), followed by utilising an electronic documentation system (29.4%) and email communication (23.5%). For foreign RCTE bank partner 2, an overwhelming majority (88.2%) reported using an electronic documentation system, with only 11.8% using email. When reporting to foreign RCTE bank partner 3, the results were most often conveyed by clinic staff (35.3%), while other responses included email (23.5%), storage within the clinic (29.4%), and electronic documentation systems (11.8%). Reporting to the Ministry of Health (Biomedicine Directorate) was conducted exclusively via email in 70.6% of cases. In 17.6% of cases, both email and paper-based reporting were used, while in 11.8% of cases, results were stored within the clinic only.

The person responsible for preparing and re-

rezultatima uspešnosti postupka svim nadležnim ustanovama bila je isključivo klinički embriolog (76,5%), zatim specijalista ginekologije i akušerstva (11,8%) i ostali u značajno manjim procentima – administrativno osoblje (5,9%) i medicinske sestre koordinatori (5,9%). Kada je u pitanju ovaj zadatak, 41,2% osoblja imalo je 6-10 godina radnog iskustva u oblasti reproduktivne medicine, dok je 29,4% imalo 1-5 godina ili više od 10 godina radnog staža. Većina je bila starosti 25-34 godine (47,1%), zatim 35-44 godine (29,4%) i 45+ godina (23,5%).

Učesnici su dali povratne informacije o privremenim smernicama, zahtevima u vezi sa dokumentacijom, učestalosti grešaka i institucionalnom podrškom u vezi sa uvozom i upotrebom doniranih reproduktivnih ćelija, kao što je prikazano u Tabeli 6. Većina ispitanika (41,2%) se složila da privremena radna uputstva data od strane Banke reproduktivnih ćelija, tkiva i embriona i Ministarstva zdravlja sadrže sve neophodne informacije, dok je 35,3% ostalo neutralno, a 17,6% se nije složilo. Što se tiče ažuriranja ovih uputstava, 41,2% se u potpunosti složilo, a 35,3% se složilo da takve promene treba da budu praćene sastancima sa centrima za vantelesnu oplodnju, Upravom za biomedicinu i Bankom reproduktivnih ćelija, tkiva i embriona radi pojašnjenja. Slično, velika većina (64,7%) se u potpunosti složila da ažuriranja treba objaviti pre nego što stupe na snagu. Kada su u pitanju zahtevi u vezi sa dokumentacijom, 47,1% se složilo, a 35,3% se u potpunosti složilo da je lista dokumenata za dobijanje dozvole za upotrebu preopširna, dok su mišljenja o dokumentaciji za dozvolu za uvoz bila više podeljena. Na pitanje o preferiranim metodama za upravljanje dokumentacijom, 52,9% je snažno preferiralo, a 41,2% više volelo korišćenje elektronskih sistema. Kada su u pitanju greške u dokumentaciji, 41,2% je izjavilo da se takve greške retko dešavaju, dok je 29,4% izjavilo da se dešavaju veoma retko. Sličan trend je primećen kada su u pitanju greške u ažuriranju informacija o donorima pre uvoza, gde je 41,2% navelo da se dešavaju veoma retko. Neusklađenost dokumentacije iz stranih banaka (npr. neusklađenost kodova) veoma retko se javljala kod 70,6% ispitanika. Najčešće prijavljivani tipovi grešaka u dokumentaciji uključivali su: greške u kodu donora ili pacijenta, odsustvo potpisa ili pečata lekara, odsustvo potpisa pacijenta, nečitljive skenirane dokumente i netačne lične podatke pacijenta. Kada je u pitanju rešavanje grešaka, 70,6% je navelo da su greške rešene potpuno i efikasno, dok je 23,5% navelo da su uglavnom

rešene. Samo jedan ispitanik (5,9%) je prijavio nerešena pitanja. Mišljenja o institucionalnoj podršci Ministarstva bila su podeljena. Dok je većina ispitanika (64,7%) ostala neutralna, 17,6% je smatralo da njihovi predlozi nisu podržani, a samo nekoliko je izrazilo aktivnu ili punu podršku (po 5,9%). Procenjena brzina dobijanja dozvola za uvoz je uglavnom kvalifikovana kao razumna (41,2%), a sporija od očekivane u 29,4% slučajeva. Međutim, postoji gotovo jednak broj odgovora koji navode da je brzina dobijanja dozvole bila veoma spora ili veoma brza (17,6% i 11,6% tim redom).

Upitnikom je procenjeno zadovoljstvo kvalitetom uvezenih reproduktivnih ćelija (sperme i oocita) iz različitih međunarodnih banaka, kao i klinički ishodi koji se odražavaju u stopama trudnoće (Tabela 9). Kada je u pitanju kvalitet uvezene sperme iz strane partnerske banke reproduktivnih ćelija, tkiva i embriona 1, većina ispitanika je izjavila da su zadovoljni (41,2%) ili veoma zadovoljni (35,3%), dok je 17,6% izrazilo neutralno mišljenje, a samo jedan centar (5,9%) nije koristio ovaj izvor. Kada je u pitanju strana partnerska banka RČTE 2, 35,3% nije uvezlo spermiju, dok su preostali odgovori bili podjednako podeljeni između neutralnih (35,3%) i zadovoljnih (29,4%). U slučaju strane partnerske banke RČTE 3, velika većina (76,5%) nije uvezla spermiju, a 17,6% je bilo zadovoljno.

Zadovoljstvo kvalitetom uvezenih oocita od strane partnerske banke RČTE 2 bilo je uglavnom neutralno (64,7%), pri čemu je 23,5% izjavilo da je nezadovoljno, a samo mali deo je izrazio zadovoljstvo (11,8%). Kada je u pitanju strana partnerska banka RČTE 3, 64,7% nije imalo uvezene oocite, dok je 17,6% bilo zadovoljno, 11,8% neutralno, a 5,9% nezadovoljno. Prilikom procene ishoda trudnoće, 47,1% centara je opisalo stope trudnoće kod mlađih pacijentkinja lečenih donorskom spermom da su u očekivanom rasponu, a 17,6% je ocenilo da su ove stope visoke ili zadovoljavajuće. Nasuprot tome, 35,4% ih je ocenilo kao niže ili umereno zadovoljavajuće. Kod primalaca oocita sa partnerima koji pokazuju normozoospermiju, samo 17,6% ispitanika je izjavilo da su stope trudnoće bile u očekivanom rasponu. U poređenju sa tim, 23,5% je prijavilo da su te stope značajno niže od očekivanih, a dodatnih 23,5% ih je ocenilo kao niže od očekivanih. Kada su upitani o ukupnim stopama trudnoće sa donorskom spermom, više od polovine (52,9%) ih je ocenilo da su u okviru očekivanja, dok je 11,8% prijavilo umereno zadovoljstvo, a 5,9% je bilo veoma zadovoljno. Konačno, ukupno zadovol-

porting the success results to all competent authorities was almost exclusively a clinical embryologist (76.5%), followed by OB/GYN specialists (11.8%) and others in significantly smaller percentages, administrative staff (5.9%), and nurse coordinators (5.9%), respectively. For this task, professional experience was predominantly 41.2% of these individuals possessed 6–10 years in reproductive medicine, while 29.4% had either 1–5 years or more than 10 years of experience. Most were aged between 25–34 years (47.1%), followed by those aged 35–44 years (29.4%) and 45+ years (23.5%).

Participants provided feedback on the temporary guidelines (PRUs), documentation requirements, error frequency, and institutional support related to the import and use of donated reproductive cells, as shown in Table 6. Most respondents (41.2%) agreed that the temporary work instructions (PRU) from the RCTE Bank and the Ministry of Health contained all the necessary information, while 35.3% remained neutral and 17.6% disagreed. Regarding updates to these instructions, 41.2% strongly agreed, and 35.3% agreed that such changes should be accompanied by meetings with IVF centres, UBM, and the RCTE Bank for clarification. Similarly, a large majority (64.7%) strongly agreed that updates should be announced before taking effect. Concerning documentation requirements, 47.1% agreed, and 35.3% strongly agreed, that the list of documents for obtaining a use permit was overly extensive, while opinions on the import permit documentation were more divided. When asked about preferred methods for managing documentation, 52.9% strongly preferred and 41.2% preferred the use of electronic systems. In terms of documentation errors, 41.2% reported that such errors occurred rarely, while 29.4% said very rarely. A similar trend was observed for errors in donor information updates before import, where 41.2% indicated they occurred very rarely. Documentation inconsistencies from foreign banks (e.g., code mismatches) were very rarely experienced by 70.6% of respondents. The most frequently reported types of documentation errors included: donor or patient code errors, absence of a physician's signature or stamp, missing patient signature, unreadable scanned documents, and incorrect patient personal data. In terms of error resolution, 70.6% stated that errors were resolved completely and efficiently, while 23.5% said they were mostly resolved. Only one respondent (5.9%) reported unresolved issues.

Perceptions of institutional support from the Ministry were mixed. While most respondents (64.7%) remained neutral, 17.6% felt their suggestions were not supported, and only a few reported active or full support (5.9% each). Assessed speed of obtaining import permits was mostly qualified as reasonable (41.2%) and slower than expected in 29.4% cases. However, there is almost an equal group of answers stating permit speed was very slow or very quick (17.6% and 11.8% respectively).

The survey assessed satisfaction with the quality of imported reproductive cells (semen and oocytes) from various international banks, as well as clinical outcomes reflected in pregnancy rates (Table 9). Regarding the quality of imported semen from foreign RCTE bank partner 1, most respondents reported being satisfied (41.2%) or very satisfied (35.3%), while 17.6% expressed neutral opinions, and only one centre (5.9%) did not use this source. For the foreign RCTE bank partner 2, 35.3% had not imported semen, while the remaining responses were evenly split between neutral (35.3%) and satisfied (29.4%). In the case of foreign RCTE bank partner 3, a large majority (76.5%) did not import semen, and 17.6% were satisfied.

Satisfaction with the quality of imported oocytes from foreign RCTE bank partner 2 was mostly neutral (64.7%), with 23.5% reporting being dissatisfied, and only a small portion expressing satisfaction (11.8%). For foreign RCTE bank partner 3, 64.7% had not imported oocytes, while 17.6% were satisfied, 11.8% neutral, and 5.9% dissatisfied. In evaluating pregnancy outcomes, 47.1% of centres described pregnancy rates in younger patients treated with donor sperm as being within the expected range, and 17.6% rated them as high and satisfactory. Conversely, 35.4% rated them as lower or moderately satisfactory. For oocyte recipients with partners exhibiting normozoospermia, only 17.6% of respondents stated that pregnancy rates were within an expected range. In comparison, 23.5% reported them as significantly lower than expected, and another 23.5% rated them as lower than expected. When asked about overall pregnancy rates with donor sperm, more than half (52.9%) assessed them as within expectations, with an additional 11.8% reporting moderate satisfaction and 5.9% being very satisfied. Finally, overall satisfaction with pregnancy rates using donor oocytes was more critical: 35.3% found the results significantly lower than expected, and 23.5% rated them as lower than expected,

jstvo stopama trudnoća korišćenjem donorskih oocita bilo je kritičnije: 35,3% je smatralo da su rezultati značajno niži od očekivanih, a 23,5% ih je ocenilo kao niže od očekivanih, dok je samo 17,6% prijavilo očekivane ishode, a 5,9% ih je opisalo kao visoke ili zadovoljavajuće.

Pre procene pouzdanosti upitnika korišćenjem Kronbahovog α koeficijenta, on je podeljen na tematske jedinice na osnovu sadržaja i svrhe pitanja. Za većinu grupa pitanja, vrednosti α su bile ispod prihvatljivog praga od 0,60, što je ukazivalo na nisku unutrašnju konzistentnost i moguće tematsku neujednačenost ili prekomernu raznolikost pitanja u okviru grupe. Jedina grupa pitanja koja je pokazala zadovoljavajuću pouzdanost ($\alpha \approx 0,60$) obuhvatala je pitanja od broja 20-28 i 30-32.

Diskusija

Medicinska tehnologija često napreduje brže od zakonskih i regulatornih okvira, posebno u osjetljivim oblastima kao što su programi doniranja reproduktivnih ćelija. Sprovedenje programa doniranja reproduktivnih ćelija u Srbiji predstavlja relativno novu proceduru u okviru nacionalnog zdravstvenog sistema. Ovaj program uključuje više zainteresovanih strana i složenu koordinaciju sistema upravljanja. Analiza RACI matrice sprovedena u ovoj studiji pokazuje da su institucije uključene u sistem doniranja ćelija generalno dobro informisane o svojim ulogama. Ministarstvo zdravlja ima najveći broj odgovornosti po pitanju informacija, time potvrđujući svoju vodeću, regulatornu i nadzornu ulogu u okviru sistema. Ovo je u skladu sa regulatornom funkcijom Ministarstva i njegovim značajnim uticajem na ključne procese donošenja odluka u okviru sistema. S druge strane, izvršne uloge se uglavnom dodeljuju domaćim bankama tkiva i klinikama za plodnost, što potvrđuje njihovu centralnu ulogu u fazi implementacije. Kao što je pokazano, Banka reproduktivnih ćelija i tkiva ima najveći broj uloga, što ukazuje na njen centralni značaj u sprovođenju procesa. Međutim, konsultativne uloge su bile značajno nedovoljno zastupljene u svim institucijama, što ukazuje na ograničen međuinstitucionalni dijalog, posebno tokom faze planiranja. Nedostatak konsultativnih uloga može ukazivati na potrebu za boljom međuinstitucionalnom saradnjom, posebno tokom faza planiranja i razvoja regulativa, kao što je naglašeno u studijama koje su analizirale modele upravljanja zdravstvenom zaštitom (11).

Pored toga, rezultati upitnika dopunjuju RACI

analizu, ukazujući da se osnovni operativni procesi, kao što su koordinacija doniranja i procedure uvoza, generalno sprovode uglavnom stručnošću i inicijativom viših kliničkih embriologa. Ovo odražava visok nivo profesionalne posvećenosti i pomaže u obezbeđivanju kvaliteta procedura. U odsustvu nacionalnih smernica za koordinaciju i procedure doniranja, ograničene su mogućnosti za povratne informacije od onih koji direktno sprovode ove procese. U opsežnom pregledu koji su spaveli Jaliwanda i saradnici (12) naglašena je potreba da se ojačaju mehanizmi koji olakšavaju prilagođavanje smernica na osnovu iskustva iz kliničke prakse, čime se pružaju vredne povratne informacije o procesu donošenja odluka.

Na osnovu rezultata, kvalitet i ishod doniranog materijala variraju među centrima, što ukazuje na potrebu za standardizacijom protokola, možda i evaluacijom banaka kao dobavljača. Klinički ishodi doniranog materijala zavise ne samo od tehničkih procedura, već i od kvaliteta doniranog materijala (13). Estudillo i saradnici su pokazali da krioprezervacija može izazvati molekularne i epigenetske promene, ukazujući da su kvalitet pre zamrzavanja i integritet nakon odmrzavanja gameta ključni za uspeh (14). Izazovi u regulisanju i upravljanju donacijom reproduktivnih ćelija prisutni su i u drugim evropskim zemljama (14). U relevantnoj literaturi je ukazano da podaci evropskih strukovnih organizacija pokazuju varijabilnost u zakonodavnim rešenjima, što dovodi do neujednačene prakse i otežava razvijanje jedinstvenih procedura (15), što su nalazi koji se poklapaju sa našim rezultatima. Pored toga, Švajcarska se suočava sa dugogodišnjim izazovima kada su u pitanju pravne regulative u oblasti doniranja reproduktivnih ćelija, uključujući restriktivne pristupe koji direktno utiču na dostupnost i organizaciju procedura (16). Ovo ukazuje na to da je složenost regulativa ključni faktor koji oblikuje funkcionisanje donorskih programa. Slični izazovi su prepoznati u istraživanjima u okviru bioekonomskih sistema (17), u kojima je navedena potreba za efikasnijim informativnim mehanizmima, boljom koordinacijom između klinika, banaka reproduktivnog materijala i regulatornih tela, kao i potreba za usaglašavanjem procedura na nacionalnom nivou.

Zaključak

Ova studija je pružila uvid u izazove koji se tiču sprovođenja programa doniranja reproduktivnih ćelija u Srbiji pre uvođenja i implementacije nacio-

while only 17.6% reported expected outcomes, and 5.9% described them as high and satisfactory.

Before assessing the reliability of the questionnaire using Cronbach's α coefficient, it was divided into thematic units based on the content and purpose of the questions. For most question groups, α values were below the acceptable threshold of 0.60, indicating low internal consistency and possibly thematic unevenness or excessive question diversity within the group. The only group of questions that exhibited satisfactory reliability ($\alpha \approx 0.60$) included questions 20–28 and 30–32.

Discussion

Medical technology often advances more rapidly than legislative and regulatory frameworks, especially in sensitive areas such as donor reproductive cell programs. The implementation of the donor reproductive cell programme in Serbia represents a relatively new development within the national healthcare system. This programme involves multiple stakeholders and complex coordination of the management system. The RACI matrix analysis conducted in this study shows that institutions involved in the donor cell system are generally well-informed about their roles. The Ministry of Health has the highest number of information responsibilities, confirming its leading, regulatory, and supervisory role within the system. This aligns with the ministry's regulatory function and its significant influence on key decision-making processes within the system. Executive roles, on the other hand, are mainly allocated to domestic tissue banks and fertility clinics, confirming their central role in the implementation phase. As shown, the Reproductive Cell and Tissue Bank has the greatest number of roles, indicating its central importance in implementing the process. However, consultative roles were notably under-represented across institutions, indicating limited inter-institutional dialogue, particularly during the planning stages. The lack of consultative roles may suggest a need for better inter-institutional cooperation, especially during the planning and policy development stages, as emphasised in studies analysing healthcare governance models (11).

In addition, findings from questionnaires complement the RACI analysis by indicating that basic operational processes, such as donor coordination and import procedures, are generally implemented mainly through the expertise and initiative of senior embryologists. This reflects a high level of profes-

sional commitment and helps to ensure the quality of the procedures. In the absence of national guidelines for coordination and donor practices, there are limited opportunities for feedback from those directly implementing these processes, from implementers. A scoping review by Jaliwanda et al. (12) highlights the need to strengthen mechanisms that facilitate the adaptation of guidelines based on clinical practice experience, thereby providing valuable feedback to the decision-making process.

Based on the results, the quality and outcome of donor material vary across centres, indicating the need for standardisation of protocols, perhaps also by evaluating banks as suppliers. Clinical outcomes of donor material depend not only on technical procedures but also on the quality of donor material (13). Estudillo et al. show that cryopreservation may induce molecular and epigenetic changes, suggesting that quality before freezing and integrity after thawing of gametes are critical for success (14). Challenges in regulating and managing the donation of reproductive cells are also present in other European countries. Relevant literature indicates that data from European professional organisations show variability in legislative solutions, leading to uneven practice and making it difficult to build uniform procedures (15), findings that align with our results. In addition, Switzerland faces long-standing regulatory challenges in the field of egg donation, including restrictive approaches that directly affect the availability and organisation of procedures (16). This indicates that regulatory complexity is a key factor shaping the functioning of donor programs. And similar challenges are recognised by research within bioeconomic systems (17), which states the need for more efficient information mechanisms, better coordination between clinics, reproductive material banks and regulatory bodies, and mentions the need to harmonise procedures at the national level.

Conclusion

This study provided insight into the challenges of implementing the reproductive cell donor program in Serbia before the introduction and implementation of a national registry. This study provided insight into the challenges of implementing the reproductive cell donor program in Serbia prior to a national registry. Findings indicate inconsistencies in procedure outcomes, partly due to donor material quality and lack of consultative procedures, and highlight the disproportionate burden on embryol-

nalnog registra. Nalazi ukazuju na nedoslednosti u ishodima procedura, delimično zbog kvaliteta doniranog materijala i nedostatka konsultativnih procedura, a ističu nesrazmerno opterećenje embriologa uz ograničeno angažovanje ostalog osoblja. Pored toga, uloga „osobe zadužene za BMPO“, koja je odgovorna za komunikaciju sa „trećim stranama“, iako jasno definisana zakonskim okvirom (Član 20, tačke 9 i 10), često ostaje nepriznata u praksi. Uvođenje mehanizama povratnih informacija i šira interakcija sa nadležnim državnim institucijama mogli bi da poboljšaju komunikaciju i efikasnost sistema. Ograničenja uključuju mali broj analiziranih centara i oslanjanje na subjektivne percepcije zaposlenih. Buduća istraživanja treba usmeriti na kvantitativne kliničke ishode i institucionalne interakcije kako bi se podržao transparentan

i efikasan program doniranja. Njih, takođe, treba usmeriti na kvantitativne analize kliničkih ishoda koji se tiču porekla i kvaliteta doniranog materijala, kao i na komparativne procene komunikacije između institucija, banaka ćelija i regulatornih tela. Iako se genetski materijal ne može direktno proceniti bez PGT, postojeći klinički i laboratorijski indikatori razvoja embriona mogu se koristiti za procenu učinka doniranih reproduktivnih ćelija. Bilo bi naročito važno sprovesti paralelne analize sa stanovišta Nacionalne banke RČTE, dodatno naglašavajući važnost uspostavljanja efikasnog, pouzdanog i transparentnog sistema za uvoz doniranih reproduktivnih ćelija pre osnivanja nacionalnog registra procedura BMPO.

Tabela 1. RACI analiza u cilju procene uloge i odgovornosti različitih institucija uključenih u program doniranja reproduktivnih ćelija

	Ministarstvo zdravlja	Uprava za biomedicinu	Banka reproduktivnih ćelija i tkiva	Banke jajnih i semenih ćelija	Klinike za vantelesnu oplodnju	Republički Fond za zdravstveno osiguranje	Komiteta za procenu pacijenata
Izdavanje DOZVOLE za uvoz reproduktivnih ćelija	A	R	A/I	I	I	I	N
UVOZ reproduktivnih ćelija	I	I	R	R/I	C/I	I	N
Priprema pacijenta za vantelesnu oplodnju sa doniranim reproduktivnim ćelijama	I	I	I	I	A/R	I	N
Evaluacija i izbor donora za primaocice (pacijente)	I	I	A/R	C	C	I	I
Usklađenost sa zakonskim propisima	A/R	A/R	C	I	I	C/I	I
Psihološke konsultacije i procena pacijenata (primalaca)	N	N	N	N	R	I	A/R
Praćenje postupka i izveštavanje	I	I	I	I	R	I	N
Donošenje ODLUKE o korišćenju doniranih reproduktivnih ćelija	A	R	N	N	I	N	N
Raspodela sredstava iz Republičkog fonda za zdravstveno osiguranje	N	N	R/I	I	I	A/R	N

R=Odgovoran, A=Krajnje odgovoran, C= Konsultovan, I= Informisan, N= Nijedno.

Tabela 2. Evaluacija RACI matrice - pivot tabela

Karakteristike	A	C	I	N	R	Ukupno
Komiteta za procenu pacijenata	1	0	2	6	1	10
Uprava za biomedicinu	1	0	4	2	3	10
Klinike za vantelesnu oplodnju	1	2	5	0	3	11
Banke jajnih i semenih ćelija	0	1	6	2	1	10
Banka reproduktivnih ćelija i tkiva	2	1	4	2	3	12
Republički fond za zdravstveno osiguranje	1	1	7	1	1	11
Ministarstvo zdravlja	3	0	4	2	1	10
Ukupno	9	5	32	15	13	74

R=Odgovoran, A=Krajnje odgovoran, C= Konsultovan, I= Informisan, N= Nijedno.

ogists with limited engagement of other staff. In addition, the role of the “person in charge of BMPO” responsible for all communication with “third parties”, although clearly defined by the legal framework (Article 20, points 9 and 10), often remains unrecognised in practice. Introducing feedback mechanisms and broader interaction with competent state institutions could improve communication and system efficiency. Limitations include the small number of centres analysed and reliance on subjective employee perceptions. Future research should focus on quantitative clinical outcomes and institutional interactions to support a transparent and effective donor program. Future research should focus on quantitative analyses of clinical outcomes related to the origin and quality of donated

material, as well as comparative evaluations of communication between institutions, banks and regulatory bodies. Although genetic quality cannot be directly assessed without PGT, existing clinical and laboratory indicators of embryo development may be used to evaluate the performance of donated reproductive cells. It would be particularly important to conduct parallel analyses from the National Bank of RCTE point of view, further emphasising the importance of establishing an efficient, reliable and transparent system for the import of donated reproductive cells before the establishment of a national registry of BMAF procedures.

Table 1. To evaluate the roles and responsibilities of various institutions involved in the reproductive cell donation program, a RACI analysis was conducted

	The Ministry of Health	Directorate of Biomedicine	Reproductive cell and tissue bank	Oocyte and Sperm Banks	Fertility clinics	Republic Fund for Health Insurance	Assessment Committee
Issuance of PERMIT for import of reproductive cells	A	R	A/I	I	I	I	N
IMPORT of reproductive cells	I	I	R	R/I	C/I	I	N
Preparing the patient for IVF with donated reproductive cells	I	I	I	I	A/R	I	N
Evaluation and selection of donors for recipients (patients)	I	I	A/R	C	C	I	I
Compliance with legislation	A/R	A/R	C	I	I	C/I	I
Psychological consultations and evaluation of patients (recipients)	N	N	N	N	R	I	A/R
Monitoring the procedure and reporting	I	I	I	I	R	I	N
Issuing a DECISION on the use of donated reproductive cells	A	R	N	N	I	N	N
Allocation of funds from the Republic Health Insurance Fund	N	N	R/I	I	I	A/R	N

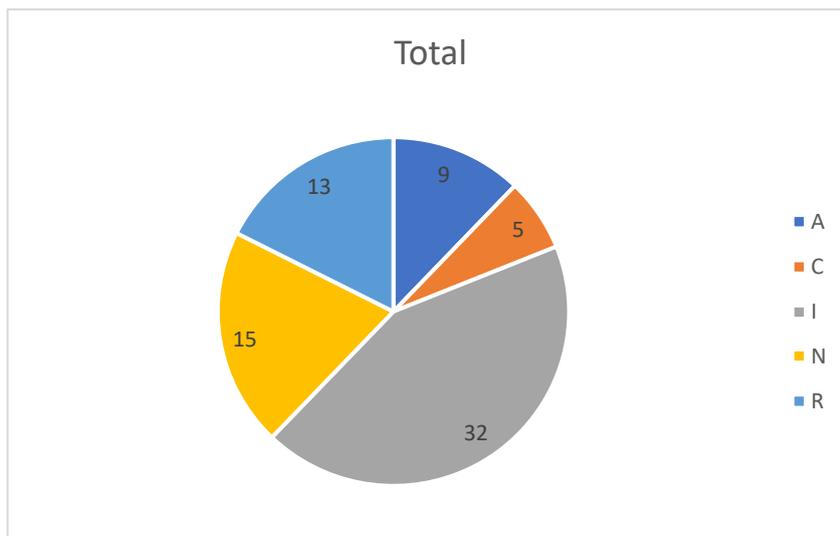
A-Accountable, R- Responsible, C- Consulted, I- Informed, N- Not Involved (None).

Table 2. RACI matrix evaluation- pivot table

Characteristics	A	C	I	N	R	Grand Total
Assessment Committee	1	0	2	6	1	10
Directorate of Biomedicine	1	0	4	2	3	10
Fertility clinics	1	2	5	0	3	11
Oocyte and Sperm Banks	0	1	6	2	1	10
Reproductive cell and tissue bank	2	1	4	2	3	12
Republic Fund for Health Insurance	1	1	7	1	1	11
The Ministry of Health	3	0	4	2	1	10
Grand Total	9	5	32	15	13	74

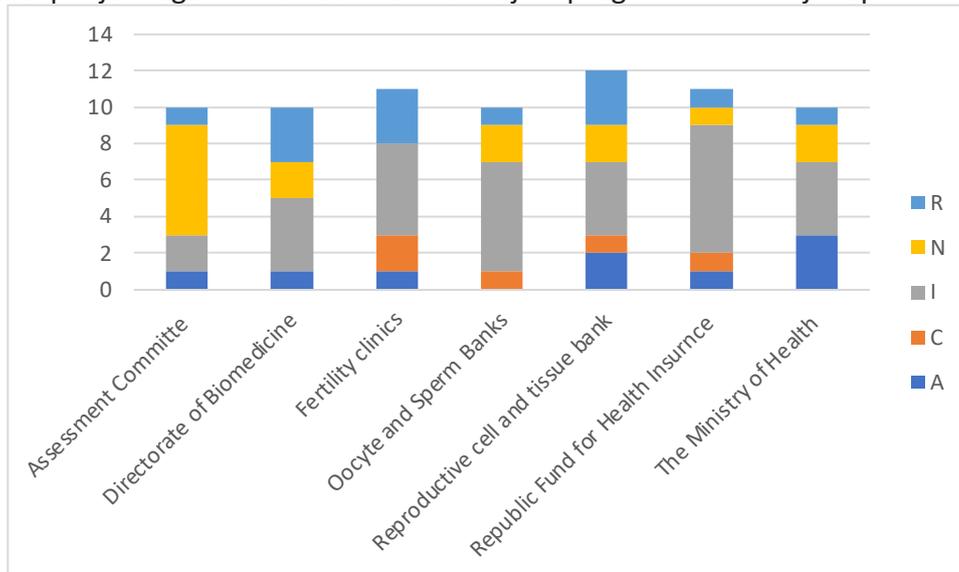
A-Accountable, R- Responsible, C- Consulted, I- Informed, N- Not Involved (None).

Slika 1. Kružni dijagram prikazuje proporcionalnu zastupljenost pojedinačnih uloga u procesu uvoza reproduktivnih ćelija



R=Odgovoran, A=Krajnje odgovoran, C= Konsultovan, I= Informisan, N= Nijedno.

Slika 2. Zastupanje uloge RACI od strane institucije u programu doniranja reproduktivnih ćelija.



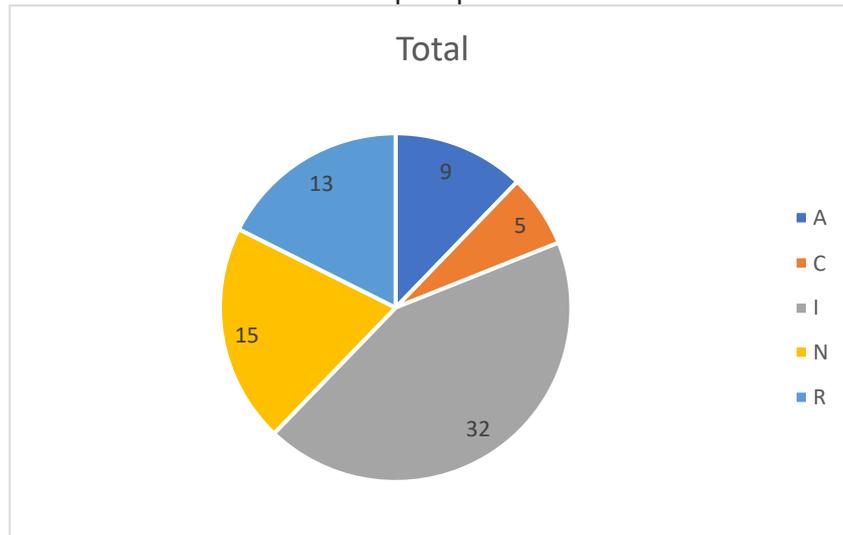
Y-osa označava broj dodeljenih RACI uloga.

R=Odgovoran, A=Odgovoran, C=Konsultovan, I=Informisan, N=Nije uključen.

Tabela 3. SWOT analiza (na osnovu RACI distribucije)

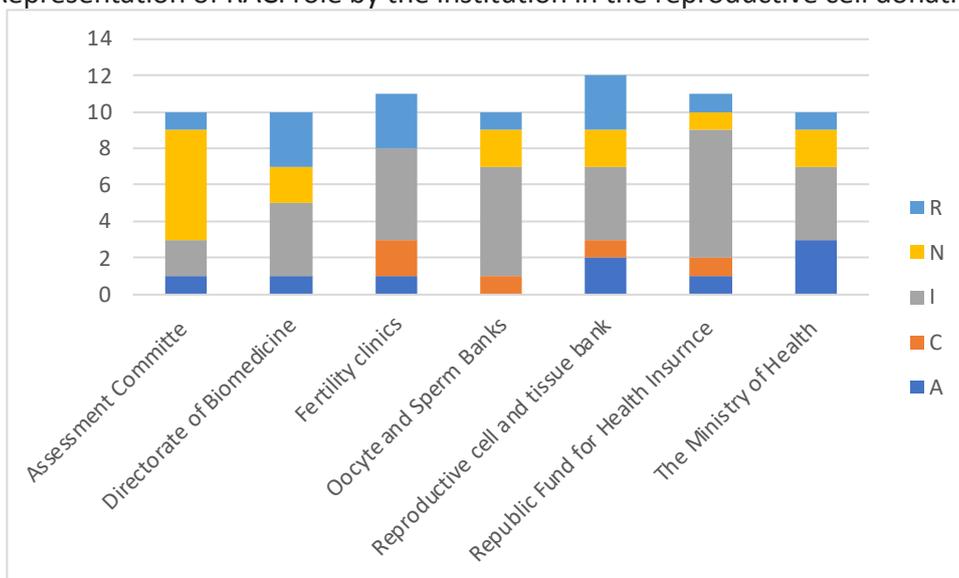
Snage	<ul style="list-style-type: none"> - Jaka zastupljenost informativne uloge (I) omogućava efikasnu cirkulaciju informacija. - Jasna podela odgovornosti i uloga (I, R, A) smanjuje rizik od preklapanja. - Ključne institucije (klinike, banke) su adekvatno uključene u operativne procese.
Slabosti	<ul style="list-style-type: none"> - Slaba zastupljenost savetodavne uloge (C) ukazuje na nedostatak sistematskih konsultacija sa relevantnim akterima. - Višestruke informativne uloge bez odgovornosti dovode do neefikasnosti u donošenju odluka. - Uloga krajnje odgovornosti (A) je centralizovana u Ministarstvu zdravlja, što može usporiti donošenje odluka.
Prilike	<ul style="list-style-type: none"> - Postoji potencijal za razvoj formalnih mehanizama konsultacija i uključivanje više aktera u savetodavnu (C) ulogu. - Preraspodela uloga odgovornosti (A) i izvršenja (R) ka decentralizovanom sistemu može doneti koristi. - Jačanje učešća manje uključenih institucija kroz obuku, formalne procedure i međuinstitucionalne forume pruža prostor za napredak.
Pretnje	<ul style="list-style-type: none"> - Prekomerna centralizacija uloga odgovornosti (A) i izvršenja (R) može preopteretiti instituciju i usporiti procese. - Institucije koje su samo informativne (I) bez drugih uloga mogu postati pasivni posmatrači. - Isključivanje određenih institucija iz aktivnosti može dovesti do nedostatka odgovornosti i inicijative.

Figure 1. The pie chart shows the proportional representation of individual roles within the reproductive cell import process



A-Accountable, R- Responsible, C- Consulted, I- Informed, N- Not Involved (None).

Figure 2. Representation of RACI role by the institution in the reproductive cell donation program



A-Accountable, R- Responsible, C- Consulted, I- Informed, N- Not Involved (None).

Table 3. SWOT Analysis (Based on RACI Distribution)

Strengths	<ul style="list-style-type: none"> - A strong representation of the informative role (I) enables the efficient circulation of information. - Clear division of responsibilities and roles (I, R, A) reduces the risk of overlap. - Key institutions (clinics, banks) are adequately involved in operational processes.
Weaknesses	<ul style="list-style-type: none"> - Weak representation of the advisory role (C) indicates a lack of systematic consultation with relevant actors. - Multiple informative roles without responsibility lead to inefficiency in decision-making. - The role of responsibility (A) is centralized in the Ministry of Health, which can slow down decision-making.
Opportunities	<ul style="list-style-type: none"> - There is potential for the development of formal consultation mechanisms and the involvement of more actors in an advisory (C) role. - Redistributing the roles of responsibility (A) and execution (R) towards a decentralised system can bring benefits. - Strengthening the involvement of less involved institutions through training, formal procedures, and inter-institutional forums provides room for progress.
Threats	<ul style="list-style-type: none"> - Excessive centralisation of the roles of responsibility (A) and execution (R) can overload an institution and slow down processes. - Institutions that are only informative (I) without other roles can become passive observers. - The exclusion of certain institutions from activities can lead to a lack of responsibility and initiative.

Tabela 4. Uloge, iskustvo i starost osoblja unutar banke reproduktivnih ćelija i tkiva

Pitanja	Kategorija	n (%)
1. Ko je odgovoran za početnu pripremu dokumentacije?	Administrativno osoblje	3 (17,6%)
	Doktor medicine (na specijalizaciji)	1 (5,9%)
	Doktor medicine (OB/GYN specijalista)	1 (5,9%)
	Klinički embriolog	3 (17,6%)
	Medicinska sestra/Tehničar	9 (52,9%)
2. Višegodišnje iskustvo u reproduktivnoj medicini (dokumentacija)	1–5 godina	6 (35,3%)
	6–10 godina	9 (52,9%)
	Preko 10 godina	2 (11,8%)
3. Godine (dokumentacija)	25–34	6 (35,3%)
	35–44	8 (47,1%)
	45+	3 (17,6%)
4. Ko naručuje i bira reproduktivne ćelije?	Administrativno osoblje	2 (11,8%)
	Doktor medicine (na specijalizaciji)	1 (5,9%)
	Doktor medicine (OB/GYN specijalista)	5 (29,4%)
	Doktor medicine(specijalista za sterilitet)	3 (17,6%)
	Klinički embriolog	5 (29,4%)
	Medicinska sestra/Tehničar	1 (5,9%)
5. Višegodišnje iskustvo (naručivanje/izbor)	1–5 godina	4 (23,5%)
	6–10 godina	6 (35,3%)
	Preko 10 godina	7 (41,2%)
6. Starost (naručivanje/izbor)	25–34	5 (29,4%)
	35–44	6 (35,3%)
	45+	6 (35,3%)
7. Ko priprema i šalje dokumenta za uvoz?	Administrativno osoblje	2 (11,8%)
	Doktor medicine (na specijalizaciji)	1 (5,9%)
	Doktor medicine (OB/GYN specijalista)	2 (11,8%)
	Klinički embriolog	8 (47,1%)
	Medicinska sestra/Tehničar	4 (23,5%)
8. Višegodišnje iskustvo (obrada dokumenata)	1–5 godina	4 (23,5%)
	6–10 godina	8 (47,1%)
	Preko 10 godina	5 (29,4%)
9. Starost (obrada dokumenata)	25–34	6 (35,3%)
	35–44	7 (41,2%)
	45+	4 (23,5%)
10. Ko komunicira sa domaćim/stranim RČTE bankama?	Administrativno osoblje	2 (11,8%)
	Doktor medicine (na specijalizaciji)	3 (17,6%)
	Doktor medicine(specijalista za sterilitet)	1 (5,9%)
	Klinički embriolog	10 (58,8%)
	Medicinska sestra/Tehničar	1 (5,9%)
11. Višegodišnje iskustvo (komunikacija)	1–5 godina	5 (29,4%)
	6–10 godina	8 (47,1%)
	Preko 10 godina	4 (23,5%)
12. Uzrast (komunikacija)	25–34	7 (41,2%)
	35–44	6 (35,3%)
	45+	4 (23,5%)

Table 4. Roles, Experience, and Age of Staff in Reproductive Cell and Tissue Bank Processes

Question	Category	n (%)
1. Who is responsible for the initial preparation of documentation?	Administrative staff	3 (17.6%)
	Medical doctor (in specialization)	1 (5.9%)
	Medical doctor (OB/GYN specialist)	1 (5.9%)
	Clinical embryologist	3 (17.6%)
	Nurse/Technician	9 (52.9%)
2. Years of experience in reproductive medicine (documentation)	1–5 years	6 (35.3%)
	6–10 years	9 (52.9%)
	Over 10 years	2 (11.8%)
3. Age (documentation)	25–34	6 (35.3%)
	35–44	8 (47.1%)
	45+	3 (17.6%)
4. Who orders and selects reproductive cells?	Administrative staff	2 (11.8%)
	Medical doctor (in specialization)	1 (5.9%)
	Medical doctor (OB/GYN specialist)	5 (29.4%)
	Medical doctor (fertility subspecialist)	3 (17.6%)
	Clinical embryologist	5 (29.4%)
	Nurse/Technician	1 (5.9%)
5. Years of experience (ordering/selection)	1–5 years	4 (23.5%)
	6–10 years	6 (35.3%)
	Over 10 years	7 (41.2%)
6. Age (ordering/selection)	25–34	5 (29.4%)
	35–44	6 (35.3%)
	45+	6 (35.3%)
7. Who prepares and sends import documents?	Administrative staff	2 (11.8%)
	Medical doctor (in specialization)	1 (5.9%)
	Medical doctor (OB/GYN specialist)	2 (11.8%)
	Clinical embryologist	8 (47.1%)
	Nurse/Technician	4 (23.5%)
8. Years of experience (document handling)	1–5 years	4 (23.5%)
	6–10 years	8 (47.1%)
	Over 10 years	5 (29.4%)
9. Age (document handling)	25–34	6 (35.3%)
	35–44	7 (41.2%)
	45+	4 (23.5%)
10. Who communicates with domestic/foreign RCTE banks?	Administrative staff	2 (11.8%)
	Medical doctor (OB/GYN specialist)	3 (17.6%)
	Medical doctor (fertility subspecialist)	1 (5.9%)
	Clinical embryologist	10 (58.8%)
	Nurse/Technician	1 (5.9%)
11. Years of experience (communication)	1–5 years	5 (29.4%)
	6–10 years	8 (47.1%)
	Over 10 years	4 (23.5%)
12. Age (communication)	25–34	7 (41.2%)
	35–44	6 (35.3%)
	45+	4 (23.5%)

Tabela 5. Izveštavanje o rezultatima uspešnosti postupka institucijama i bankama

Pitanja	Kategorija	n (%)
13. Metod slanja REZULTATA USPEHA stranom RČTE biobanci partneru 1	Elektronski sistem dokumentacije	5 (29,4%)
	E-pošta	4 (23,5%)
	Čuva se u klinici	7 (41,2%)
	Drugo	1 (5,9%)
14. Metod slanja REZULTATA USPEHA stranom RČTE biobanci partneru 2	Elektronski sistem dokumentacije	15 (88,2%)
	E-pošta	2 (11,8%)
15. Metod slanja REZULTATA USPEHA stranom biobanci partneru 3	Osoblje klinike	6 (35,3%)
	Elektronski sistem dokumentacije	2 (11,8%)
	E-pošta	4 (23,5%)
	Čuva se u klinici	5 (29,4%)
16. Način slanja REZULTATA USPEHA Ministarstvu zdravlja (Uprava za biomedicinu)	I papir i E-pošta	3 (17,6%)
	Čuva se u klinici	2 (11,8%)
	Samo E-pošta	12 (70,6%)
17. Ko priprema i šalje REZULTATE USPEHA svim relevantnim institucijama?	Administrativno osoblje	1 (5,9%)
	OB/GYN specijalista	2 (11,8%)
	Klinički embriolog	13 (76,5%)
	Medicinska sestra koordinator	1 (5,9%)
	1–5 godina	5 (29,4%)
18. Višegodišnje iskustvo u reproduktivnoj medicini (osoba odgovorna za slanje rezultata)	6–10 godina	7 (41,2%)
	Preko 10 godina	5 (29,4%)
	25–34	8 (47,1%)
19. Starost osobe odgovorne za slanje rezultata	35–44	5 (29,4%)
	45+	4 (23,5%)

Tabela 6. Povratne informacije korisnika o procedurama, greškama i institucionalnoj podršci

Pitanja	Odgovori	n (%)
20. Da li privremena radna uputstva (PRU) RČTE banke i UBM-a sadrže sve potrebne informacije?	Ne slažem se	3 (17,6%)
	Neutralno	6 (35,3%)
	Slažem se	7 (41,2%)
	Uopšte se ne slažem	1 (5,9%)
21. Da li nakon ažuriranja i izmena PRU-ova treba da se organizuju sastanci sa centrima za vantelesnu oplodnju, UBM-om i RČTE bankom radi razjašnjenja?	Ne slažem se	1 (5,9%)
	Neutralno	3 (17,6%)
	Slažem se	6 (35,3%)
	Uopšte se ne slažem	7 (41,2%)
22. Da li ažuriranja PRU-ova treba objaviti pre nego što stupe na snagu?	Ne slažem se	1 (5,9%)
	Slažem se	5 (29,4%)
	Uopšte se ne slažem	11 (64,7%)
23. Da li je lista potrebnih dokumenata za dozvole za uvoz preopširna?	Ne slažem se	4 (23,5%)
	Neutralno	5 (29,4%)

Table 5. Reporting Procedure Success Results to Institutions and Banks

Question	Category	n (%)
13. Method of sending SUCCESS RESULTS to foreign RCTE bank partner 1	Electronic documentation system	5 (29.4%)
	Email	4 (23.5%)
	Stored within clinic	7 (41.2%)
	Other	1 (5.9%)
14. Method of sending SUCCESS RESULTS to foreign RCTE bank partner 2	Electronic documentation system	15 (88.2%)
	Email	2 (11.8%)
15. Method of sending SUCCESS RESULTS to foreign RCTE bank partner 3	Clinic staff	6 (35.3%)
	Electronic documentation system	2 (11.8%)
	Email	4 (23.5%)
	Stored within clinic	5 (29.4%)
16. Method of sending SUCCESS RESULTS to Ministry of Health (Biomedicine Directorate)	Both paper and email	3 (17.6%)
	Stored within clinic	2 (11.8%)
	Email only	12 (70.6%)
17. Who prepares and sends SUCCESS RESULTS to all relevant institutions?	Administrative staff	1 (5.9%)
	OB/GYN specialist	2 (11.8%)
	Clinical embryologist	13 (76.5%)
	Nurse coordinator	1 (5.9%)
18. Years of experience in reproductive medicine (person responsible for sending results)	1–5 years	5 (29.4%)
	6–10 years	7 (41.2%)
	Over 10 years	5 (29.4%)
19. Age of the person responsible for sending results	25–34	8 (47.1%)
	35–44	5 (29.4%)
	45+	4 (23.5%)

Table 6. User Feedback on Procedures, Errors, and Institutional Support

Question	Response	n (%)
20. Do the temporary work instructions (PRU) of the RCTE Bank and UBM contain all necessary information?	Disagree	3 (17.6%)
	Neutral	6 (35.3%)
	Agree	7 (41.2%)
	Strongly disagree	1 (5.9%)
21. Should updates and amendments to PRUs be followed by meetings with IVF centers, UBM, and the RCTE Bank for clarification?	Disagree	1 (5.9%)
	Neutral	3 (17.6%)
	Agree	6 (35.3%)
	Strongly agree	7 (41.2%)
22. Should updates to PRUs be announced before taking effect?	Disagree	1 (5.9%)
	Agree	5 (29.4%)
	Strongly agree	11 (64.7%)
23. Is the list of required documents for import permits too extensive?	Disagree	4 (23.5%)
	Neutral	5 (29.4%)

Pitanja	Odgovori	n (%)
	Slažem se	4 (23,5%)
	Uopšte se ne slažem	1 (5,9%)
	U potpunosti se slažem	3 (17,6%)
24. Da li je lista dokumenata za odobrenje upotrebe preobimna?	Ne slažem se	1 (5,9%)
	Neutralno	1 (5,9%)
	Slažem se	8 (47,1%)
	Uopšte se ne slažem	1 (5,9%)
	U potpunosti se slažem	6 (35,3%)
25. Da li biste više voleli elektronski sistem za upravljanje uvoznom dokumentacijom?	Da, više bih voleo/volela	7 (41,2%)
	Ne, ne bih više voleo/volela	1 (5,9%)
	Ja bih snažno preferirao/la	9 (52,9%)
26. Koliko često se javljaju greške u dokumentaciji koja se šalje RČTE banci?	Veoma često	1 (5,9%)
	Često	2 (11,8%)
	Neutralno	2 (11,8%)
	Retko	7 (41,2%)
	Veoma retko	5 (29,4%)
27. Koliko često se javljaju greške prilikom obaveštavanja RČTE banke o promenama donora pre uvoza?	Često	1 (5,9%)
	Neutralno	4 (23,5%)
	Retko	5 (29,4%)
	Veoma retko	7 (41,2%)
28. Koliko često je dokumentacija strane banke nedosledna (npr. neusklađeni kodovi)?	Veoma često	1 (5,9%)
	Neutralno	2 (11,8%)
	Retko	2 (11,8%)
	Veoma retko	12 (70,6%)
29. Najčešće vrste grešaka u dokumentaciji poslatih banci (više odgovora):	Greška koda donatora	3 (17,6%)
	Greška koda pacijenta	2 (11,8%)
	Nepotpun pečat/potpis lekara	3 (17,6%)
	Nečitljiv skenirani dokument	2 (11,8%)
	Nedostaje potpis pacijenta	2 (11,8%)
	Netačni lični podaci	4 (23,5%)
30. Koliko efikasno se greške rešavaju sa RČTE bankom?	Potpuno efikasno	12 (70,6%)
	Uglavnom rešeno	4 (23,5%)
	Nije uopšte rešeno	1 (5,9%)
31. Da li Ministarstvo podržava predloge vašeg centra u vezi sa propisima BMPO-a?	Ne podržava	3 (17,6%)
	Neutralno	11 (64,7%)
	Podržava	1 (5,9%)
	Snažno ne podržava	1 (5,9%)
	U potpunosti podržava	1 (5,9%)
32. Kako biste ocenili brzinu dobijanja dozvola za uvoz od RČTE banke?	Brzo	2 (11,8%)
	Razumno (ni brzo ni sporo)	7 (41,2%)
	Sporije nego što se očekivalo	5 (29,4%)
	Veoma sporo	3 (17,6%)

Question	Response	n (%)
24. Is the list of documents for use approval too extensive?	Agree	4 (23.5%)
	Strongly disagree	1 (5.9%)
	Strongly agree	3 (17.6%)
25. Would you prefer an electronic system for managing import documentation?	Disagree	1 (5.9%)
	Neutral	1 (5.9%)
	Agree	8 (47.1%)
	Strongly disagree	1 (5.9%)
	Strongly agree	6 (35.3%)
26. How often do errors occur in documentation sent to the RCTE Bank?	Yes, I would prefer	7 (41.2%)
	No, I would not prefer	1 (5.9%)
	I would strongly prefer	9 (52.9%)
27. How often do errors occur in informing the RCTE Bank about donor changes before import?	Very often	1 (5.9%)
	Often	2 (11.8%)
	Neutral	2 (11.8%)
	Rarely	7 (41.2%)
	Very rarely	5 (29.4%)
28. How often is the foreign bank documentation inconsistent (e.g., mismatched codes)?	Often	1 (5.9%)
	Neutral	4 (23.5%)
	Rarely	5 (29.4%)
	Very rarely	7 (41.2%)
29. Most frequent types of documentation errors sent to the Bank (multiple answers):	Very often	1 (5.9%)
	Neutral	2 (11.8%)
	Rarely	2 (11.8%)
	Very rarely	12 (70.6%)
	Donor code error	3 (17.6%)
30. How efficiently are errors resolved with the RCTE Bank?	Patient code error	2 (11.8%)
	Incomplete physician stamp/signature	3 (17.6%)
	Unreadable scanned document	2 (11.8%)
	Missing patient signature	2 (11.8%)
	Incorrect personal data	4 (23.5%)
	Fully efficiently	12 (70.6%)
	Mostly resolved	4 (23.5%)
Not resolved at all	1 (5.9%)	
31. Does the Ministry support your center's suggestions regarding BMPO regulations?	Does not support	3 (17.6%)
	Neutral	11 (64.7%)
	Supports	1 (5.9%)
	Strongly does not support	1 (5.9%)
	Fully supports	1 (5.9%)
32. How would you rate the speed of obtaining import permits from the RCTE Bank?	Quick	2 (11.8%)
	Reasonable (neither fast nor slow)	7 (41.2%)
	Slower than expected	5 (29.4%)
	Very slow	3 (17.6%)

Tabela 7. Anketa je procenila zadovoljstvo kvalitetom uvezenih reproduktivnih ćelija (sperma i oocita) iz različitih međunarodnih banaka

Pitanja	Odgovori	n (%)
33. Zadovoljstvo kvalitetom uvezeih semenih ćelija iz stranih biobanaka partnera 1	Nije uvezeno	1 (5,9%)
	Neutralno (ni zadovoljan ni nezadovoljan)	3 (17,6%)
	Veoma zadovoljan/zadovoljna	6 (35,3%)
	Zadovoljan	7 (41,2%)
34. Zadovoljstvo kvalitetom uvezenih semenih ćelija iz stranih biobanaka partnera 2	Nije uvezeno	6 (35,3%)
	Neutralno (ni zadovoljan ni nezadovoljan)	6 (35,3%)
	Zadovoljan	5 (29,4%)
35. Zadovoljstvo kvalitetom uvezenih semenih ćelija iz stranih biobanaka partnera 3	Nije uvezeno	13 (76,5%)
	Neutralno (ni zadovoljan ni nezadovoljan)	1 (5,9%)
	Zadovoljan	3 (17,6%)
36. Zadovoljstvo kvalitetom uvezenih jajnih ćelija iz biobanke jajnih i semenih ćelija, partnera 2	Nezadovoljan	4 (23,5%)
	Neutralno (ni zadovoljan ni nezadovoljan)	11 (64,7%)
	Veoma zadovoljan	1 (5,9%)
	Zadovoljan	1 (5,9%)
37. Zadovoljstvo kvalitetom uvezenih oocita iz biobanke jajnih i semenih ćelija, partnera 3	Nezadovoljan	1 (5,9%)
	Nije uvezeno	11 (64,7%)
	Neutralno (ni zadovoljan ni nezadovoljan)	2 (11,8%)
	Zadovoljan	3 (17,6%)
38. Zadovoljstvo stopom trudnoće kod mlađih pacijentkinja (donorske semene ćelije)	Neutralno	2 (11,8%)
	Umereno	2 (11,8%)
	Niže od očekivanog	2 (11,8%)
	U okviru očekivanog raspona	8 (47,1%)
	Visoko i zadovoljavajuće	3 (17,6%)
39. Zadovoljstvo stopom trudnoće kod primalaca jajnih ćelija (normozoospermija)	Neutralno	1 (5,9%)
	Umereno	4 (23,5%)
	Niže od očekivanog	4 (23,5%)
	U okviru očekivanog raspona	3 (17,6%)
	Značajno niže nego što se očekivalo	4 (23,5%)
	Visoko i zadovoljavajuće	1 (5,9%)
40. Opšte zadovoljstvo stopom trudnoća (donorske semene ćelije)	Neutralno	1 (5,9%)
	Umereno	2 (11,8%)
	Niže od očekivanog	4 (23,5%)
	U okviru očekivanog raspona	9 (52,9%)
	Visoko i zadovoljavajuće	1 (5,9%)
41. Opšte zadovoljstvo stopom trudnoća (donorske jajne ćelije)	Umereno	3 (17,6%)
	Niže od očekivanog	4 (23,5%)
	U okviru očekivanog raspona	3 (17,6%)
	Značajno niže nego što se očekivalo	6 (35,3%)
	Visoko i zadovoljavajuće	1 (5,9%)

Table 7. The survey assessed satisfaction with the quality of imported reproductive cells (semen and oocytes) from various international banks

Question	Response	n (%)
33. Satisfaction with quality of imported semen from foreign banks partner 1	Not imported	1 (5.9%)
	Neutral (neither satisfied nor dissatisfied)	3 (17.6%)
	Very satisfied	6 (35.3%)
	Satisfied	7 (41.2%)
34. Satisfaction with quality of imported semen from foreign banks partner 2	Not imported	6 (35.3%)
	Neutral (neither satisfied nor dissatisfied)	6 (35.3%)
	Satisfied	5 (29.4%)
35. Satisfaction with quality of imported semen from foreign banks partner 3	Not imported	13 (76.5%)
	Neutral (neither satisfied nor dissatisfied)	1 (5.9%)
	Satisfied	3 (17.6%)
36. Satisfaction with quality of imported oocytes from Oocyte and sperm banks partner 2	Dissatisfied	4 (23.5%)
	Neutral (neither satisfied nor dissatisfied)	11 (64.7%)
	Very satisfied	1 (5.9%)
	Satisfied	1 (5.9%)
37. Satisfaction with quality of imported oocytes from Oocyte and sperm banks partner 3	Dissatisfied	1 (5.9%)
	Not imported	11 (64.7%)
	Neutral (neither satisfied nor dissatisfied)	2 (11.8%)
	Satisfied	3 (17.6%)
38. Satisfaction with pregnancy rate in younger patients (donor sperm)	Neutral	2 (11.8%)
	Moderate	2 (11.8%)
	Lower than expected	2 (11.8%)
	Within expected range	8 (47.1%)
	High and satisfactory	3 (17.6%)
39. Satisfaction with pregnancy rate in oocyte recipients (normozoospermia)	Neutral	1 (5.9%)
	Moderate	4 (23.5%)
	Lower than expected	4 (23.5%)
	Within expected range	3 (17.6%)
	Significantly lower than expected	4 (23.5%)
	High and satisfactory	1 (5.9%)
40. Overall satisfaction with pregnancy rate (donor sperm)	Neutral	1 (5.9%)
	Moderate	2 (11.8%)
	Lower than expected	4 (23.5%)
	Within expected range	9 (52.9%)
	High and satisfactory	1 (5.9%)
41. Overall satisfaction with pregnancy rate (donor oocytes)	Moderate	3 (17.6%)
	Lower than expected	4 (23.5%)
	Within expected range	3 (17.6%)
	Significantly lower than expected	6 (35.3%)
	High and satisfactory	1 (5.9%)

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