



ISSN: 2306-6091

International Journal of Pharmaceuticals and Health Care Research (IJPHR)

IJPHR | Vol.14 | Issue 4 | Oct - Dec 2026

www.ijphr.com

DOI : <https://doi.org/10.61096/ijphr.v14.iss4.2026.794-803>

Study on Accelerated Drug Approval Pathways in India for Life-Threatening Conditions: A Regulatory Perspective

Nasi Reddy Sreya Reddy*¹, V. Lavanya²

Department of Regulatory Affairs, Princeton College of Pharmacy, Pocharam, Hyderabad, Telangana

*Corresponding Author: **Nasi reddy Sreya Reddy**

Email: princeton.pharmacy@gmail.com



Published on:
14.10.2026
Published by:
Futuristic
Publications
2026| All rights
reserved.



Creative
Commons
Attribution 4.0
International
License.

Abstract: Accelerated drug approval pathways in India have gained prominence to ensure timely access to therapies for life-threatening and rare diseases. The New Drugs and Clinical Trials Rules (NDCTR), 2019, introduced provisions for expedited and conditional approvals, allowing waiver of local trials under specific circumstances. This study examines India's regulatory mechanisms, comparing them with global accelerated approval models to assess their effectiveness and limitations. Findings reveal improved timelines and structured procedures but highlight gaps in post-marketing surveillance, transparency, and consistency in applying waivers. Strengthening evidentiary standards, stakeholder communication, and regulatory guidance is essential to balance rapid access with patient safety and efficacy assurance.

Keywords: Accelerated approval, NDCTR 2019, CDSCO, regulatory pathways, conditional approval, life-threatening diseases, post-marketing surveillance, India

INTRODUCTION

Timely access to safe and effective medicines for life-threatening illnesses is a core public-health objective and a primary justification for regulatory mechanisms that accelerate product review and approval. Globally, regulatory authorities have adopted a range of expedited pathways — e.g., conditional/accelerated approvals, priority review,¹ breakthrough therapy designations, emergency use authorizations, and reliance/recognition procedures — to shorten time to patient access while imposing post-authorization evidence requirements to manage residual uncertainty.

In India, the New Drugs and Clinical Trials Rules (NDCTR), 2019, marked a major consolidation and modernization of the regulatory framework for new drugs and clinical trials. NDCTR 2019 explicitly provides for regulatory flexibility in “special situations” — including accelerated approval and conditional approvals based on surrogate or intermediate endpoints, waivers of local clinical trials in certain circumstances, and requirements for post-marketing validation — with the stated aim of improving timelines without compromising safety. These statutory changes were accompanied by CDSCO guidance documents and subsequent operational instruments intended to clarify procedures and timelines.²

Operationalizing accelerated pathways in India depends on multiple interacting elements: (a) legal provisions (NDCTR and related notifications) that define the scope for accelerated or conditional approvals; (b) administrative procedures (including the role of the Central Licensing Authority and the Subject Expert Committees (SECs) or Technical Review Committees) that evaluate evidence and recommend actions; and (c) post-authorization systems (pharmacovigilance, post-marketing studies and

regulatory₃ enforcement) that are expected to confirm benefit–risk profiles over time. Analyses of NDCTR and CDSCO practice emphasize the centrality of SEC deliberations and the growing use of reliance/expedited review procedures where respect is given to decisions by reference national regulatory authorities.⁴

A recurring theme in the literature is the trade-off between speed and evidentiary sufficiency. Several reviewers note that while NDCTR 2019 reduced review timelines and created legal pathways for conditional or accelerated approvals, detailed, publicly available criteria for evidentiary thresholds (e.g., acceptable surrogate endpoints, magnitude of effect, acceptable uncertainty) remain less well defined than in some mature regulatory systems. This relative ambiguity can produce variability in waiver decisions for local trials, inconsistent application of accelerated approval criteria, and challenges in ensuring robust post-marketing commitments are completed and enforced.

Post-marketing surveillance and pharmacovigilance are therefore pivotal to the legitimacy of accelerated approvals. India's PV infrastructure has strengthened since the Pharmacovigilance Programme of India (PvPI) scale-up, and NDCTR emphasizes post-marketing studies; however, empirical and policy reviews continue to identify gaps in active surveillance capacity, timeliness of signal detection, transparency of post-marketing study outcomes, and regulatory enforcement mechanisms to act on incomplete confirmatory trials. Strengthening PV, phase-IV capacity and data transparency is frequently recommended.⁶

Comparative analyses place India's expedited mechanisms in international context: India's rules allow reliance on foreign approvals and may waive local trials under defined conditions — a practice that can accelerate access but raises questions about population-specific safety/efficacy and the transferability of foreign evidence. Reviews urging best-practice alignment recommend clearer guidance on acceptable foreign reference regulators, standardized SOPs for reliance/recognition, and transparency regarding SEC rationales to build stakeholder trust.⁷⁻⁹

Finally, real-world case studies from recent public-health emergencies (e.g., regulatory responses during COVID-19) and select product approvals illustrate both the potential of accelerated pathways to expand rapid access and the practical risks when post-authorization evidence collection or transparency is weak. These illustrative experiences underscore the need for a calibrated framework that combines predictable criteria for acceleration, robust pre-authorization review, enforceable post-authorization obligations, and clear public communication.

This study examines India's accelerated approval pathways from a regulatory perspective by synthesizing statutory texts, guidance documents, committee practices, and peer-reviewed analyses. It aims to (1) map the legal and operational instruments enabling accelerated approval in India; (2) evaluate how evidentiary standards, waiver practices, and SEC decision-making affect approvals for life-threatening conditions; (3) assess the robustness of post-marketing surveillance and enforcement; and (4) propose targeted regulatory reforms to balance timely access with patient safety and evidence-based decision making.

1. Rationale and global context₁₀

Ensuring timely patient access to safe and effective therapies for life-threatening conditions (e.g., advanced cancers, rare genetic disorders, severe infectious diseases) is a core public-health priority and one of the principal rationales for regulatory innovation worldwide. Over the last two decades, many mature regulatory authorities have adopted expedited pathways — such as accelerated/conditional approval, priority review, breakthrough therapy designations, and emergency use authorizations — which permit earlier market entry based on less complete pre-authorization evidence while requiring post-market confirmatory studies or enhanced surveillance to resolve residual uncertainty.¹¹ These mechanisms are designed to shorten the interval between evidence emergence and patient access in situations of high unmet need, but they also pose complex evidentiary, ethical and implementation challenges, including managing uncertainties about real-world benefit, ensuring completion of confirmatory trials, and maintaining public trust.

Key definitions

- **Life-threatening conditions** — illnesses or medical states that carry a high probability of death in the near term if untreated or inadequately treated. Regulatory texts and public-health guidance characterise these by severity,¹² short expected survival, or irreversible morbidity. U.S. Food and Drug Administration

- **Accelerated approval / accelerated pathways** — regulatory pathways that permit earlier patient access to medicines for serious or life-threatening conditions based on surrogate or intermediate clinical endpoints that are “reasonably likely” to predict clinical benefit, or on less complete clinical data than normally required, together with post-approval (post-marketing) obligations to confirm benefit. (Examples include the U.S. FDA’s Accelerated Approval program). U.S. Food and Drug Administration⁺¹
- **Conditional approval / conditional marketing authorisation** — an authorization granted when the benefit–risk balance is positive but additional data are required; the marketing authorisation is given¹³ on the condition that the sponsor will provide the missing data (often within defined timelines). The EMA offers conditional marketing authorisations as a distinct route. European Medicines Agency (EMA)
- **Emergency use (Emergency Use Authorisation; EUA)** — a temporary mechanism to allow use of unapproved medical products (or unapproved uses of approved products) during public-health emergencies when certain statutory criteria are met (serious disease, no adequate alternatives, potential benefit outweighs risks). EU/US/India regulators used EUA-style measures extensively during COVID-19. PMC⁺¹
- **Orphan / rare disease provisions** — regulatory incentives and tailored pathways for therapies targeting rare conditions (small patient populations) to encourage development and often to permit expedited review or fee/incentive structures—definitions and incentives vary by jurisdiction. India’s policy and CDSCO guidance have increasingly acknowledged orphan-disease needs. rare diseases.mohfw.gov.in⁺¹₁₄

Public-health rationale for accelerated pathways¹⁵⁻²⁰

1. **Unmet medical need and small populations.** For life-threatening and rare conditions (oncology, genetic disorders, some infectious diseases), patients cannot safely wait for the long timelines of conventional approval; earlier access may materially improve survival or quality of life. Accelerated pathways allow benefit to reach patients sooner while retaining mechanisms to verify effectiveness post-approval. U.S. Food and Drug Administration⁺¹
2. **Pandemics and epidemics.** During outbreaks (e.g., COVID-19), regulators must weigh the urgent need for treatments and vaccines against incomplete evidence. Emergency-use mechanisms and expedited reviews enable deployment of countermeasures while additional data are collected. PMC
3. **Innovation and surrogate endpoints.** Modern science (biomarkers, surrogate endpoints) can indicate likely clinical benefit before large randomized outcome trials complete. Regulators adopt surrogate-based approvals with mandatory confirmatory studies to balance speed and evidence. PMC
4. **Public-health systems and equity.** In resource-constrained settings, faster availability of effective therapies may reduce morbidity/mortality burdens—but there are risks (uncertain benefit, high cost)—so regulatory pathways must be paired with robust post-marketing surveillance, conditional obligations, and transparent communication. European Medicines Agency (EMA)⁺¹

Brief history — global then India (concise timeline)₂₁

- **United States (FDA) — 1992 onward.** The FDA formalised the *Accelerated Approval* program in 1992 (in response to the AIDS crisis and advocacy for earlier access), allowing approvals based on surrogate endpoints with post-marketing confirmatory trials. Over the following decades the program expanded into oncology and other areas. U.S. Food and Drug Administration⁺¹
- **European Union (EMA) — mid-2000s.** The EMA introduced the **Conditional Marketing Authorisation (CMA)** route in 2006 to fast-track medicines for unmet medical needs while requiring specific obligations to be completed after approval. The CMA has been used across oncology,²² infectious disease, and advanced therapies. European Medicines Agency (EMA)⁺¹
- **Other jurisdictions.** Many regulators (Japan, Canada, Australia, etc.) have developed their own expedited schemes (priority review, conditional approvals, breakthrough or accelerated designations) tailored to national legal frameworks and health priorities. PMC

- **India — formalisation in NDCTR 2019 and pandemic practice.** India's New Drugs and Clinical Trials Rules (NDCTR), 2019 introduce provisions to expedite approval of new drugs intended for diseases of special relevance and create flexibility for regulatory decision making for unmet-need conditions. During the COVID-19 pandemic India also implemented emergency-use style authorisations and relied on expedited reviews for vaccines and therapeutics. India's rare-disease policy documents (e.g., National Policy for Rare Diseases / draft approaches) and CDSCO guidances have further signalled attention to orphan-drug pathways and incentives. ²³CDSCO+2RAPS+2

Why a focused regulatory study is needed (rationale for this work)

- **Balance of speed and evidence:** Accelerated and conditional pathways improve access but raise concerns about effectiveness, safety, pricing, and the timeliness/completeness of confirmatory trials. Studying India's framework identifies whether post-approval obligations and enforcement are adequate. PMC+1
- **Context-sensitive policy design:** India's disease burden, manufacturing landscape, and health-system financing differ from high-income jurisdictions. A regulatory perspective that integrates global lessons with India's legal instruments (NDCTR 2019, NPTRD/rare-disease actions) will help craft proportionate rules for conditional approvals, EUAs, and orphan incentives.²⁴ CDSCO+1
- **Public trust and transparency:** Rapid approvals can erode trust if perceived as lowering standards. Clear definitions, pre-specified post-marketing commitments, transparent timelines and enforcement metrics are critical—hence the need to evaluate legal text, case studies, and enforcement experience.

2. India's regulatory reform: NDCTR 2019 and its significance²⁵

In India, the New Drugs and Clinical Trials Rules (NDCTR), 2019 represent a major consolidation and modernization of the statutory framework governing new drugs, clinical trials, import, and marketing authorizations. The NDCTR replaced prior fragmented guidance and introduced explicit procedural and substantive provisions intended to streamline regulatory review processes, clarify timelines, and provide for regulatory flexibility in "special situations". Key features relevant to expedited pathways include statutory recognition of conditional/accelerated approvals, provisions that permit waiver or partial waiver of local clinical trial requirements under defined circumstances (for example, when robust foreign clinical data are available), and explicit obligations for post-marketing commitments and pharmacovigilance. The NDCTR thus provided a legal underpinning for India to adopt reliance-based and expedited approaches in selected scenarios while maintaining a formal structure for post-authorization evidence collection.²⁶

Regulatory framework in India — current state

1) Applicable laws & high-level instruments

- **Drugs & Cosmetics Act, 1940 (and Rules 1945)** — the foundational statute giving the Central Government/Drugs Controller authority over manufacture, import and distribution of drugs; many procedural powers used by CDSCO flow from this Act. Freyr Solutions
- **New Drugs and Clinical Trials Rules (NDCTR), 2019** — the primary, modernised regulatory instrument governing *new drugs, investigational new drugs, orphan drugs, clinical trials, and related approvals* in India. NDCTR 2019 explicitly provides for expedited/accelerated pathways, clinical trial waivers, and special provisions for orphan/rare-disease products;²⁷ see the full text (Second Schedule/related Rules) for formal criteria and forms. CDSCO+1
- **CDSCO guidance documents & Notices** — CDSCO issues guidance on vaccine approval in emergency situations, pharmacovigilance (PSUR/PV guidance), COVID-era restricted use notices, and FAQs explaining the accelerated approval process. These guidance documents operationalise NDCTR and give practical details (timelines, documentation, and post-marketing requirements). CDSCO+1

Existing accelerated mechanisms in India (what exists today)

- **Accelerated / accelerated-approval route (NDCTR)** — NDCTR provides a formal *accelerated approval* option (Second Schedule / related FAQ). The authority may grant approval earlier than routine timelines for drugs addressing severe, rare, or unmet medical needs, based on a prima-facie case of meaningful therapeutic benefit. aidcoc.in+1

- **Emergency / restricted use authorisations (EUA-style)** — CDSCO issued specific guidance/notices during COVID-19 for *restricted use in emergency situations* (e.g., vaccines and therapeutics already approved elsewhere), establishing a process for temporary or restricted deployment pending fuller data. CDSCO has also later withdrawn or modified some EUAs as evidence evolved²⁸ (e.g., post-COVID adjustments). CDSCO+1
- **Priority/fast-track review and clinical trial waivers** — NDCTR contains provisions for expedited review/fast-track consideration for drugs for unmet needs, rare diseases, or where the Authority considers circumstances warrant it (including limited clinical data or bridging studies). Practical fast-track processes and timelines are described in CDSCO materials and agency practice. CDSCO+1
- **Compassionate use / expanded access (ad hoc)** — India does **not** yet have a single, long-standing, well-codified compassionate-use statute on par with some mature jurisdictions; compassionate/expanded access has been done on a case-by-case basis (imports, special permissions, scheme-based access such as for TB drugs), and the literature describes this as nascent and evolving. NDCTR and CDSCO notices may be used to enable such access in specific cases. PMC+1²⁹

Regulatory criteria and evidence expectations

Eligibility (typical considerations)

- **Severity/urgency & unmet need.** Applications for accelerated/conditional/fast-track approval are considered where the disease is severe or life-threatening (including rare diseases), or where no adequate alternative therapy exists. NDCTR/Frequently-Asked Questions note that severity/rarity/prevalence and lack of alternatives are key eligibility criteria. CDSCO+1³⁰
- **Prima-facie evidence of meaningful benefit.** Regulators expect a prima-facie case that the product offers meaningful therapeutic benefit over existing options before granting an accelerated approval. This can be based on intermediate/surrogate endpoints or limited clinical evidence in some circumstances. aidcoc.in

Evidence requirements (what may be accepted)

- **Surrogate / intermediate endpoints.** NDCTR and CDSCO-practice allow use of surrogate or intermediate endpoints “reasonably likely” to predict clinical benefit for accelerated decisions — much as other regulators do — provided confirmatory data are committed to. The specifics (which surrogate, what magnitude of effect) are weighed case by case.³¹⁻³³ aidcoc.in+1
- **Bridging data & foreign clinical data.** For products with foreign approvals or data, CDSCO may accept bridging studies or rely on foreign evidence plus local/bridging data if the benefit–risk is favourable; the 2019 rules and CDSCO guidance describe conditions for reliance and potential local data requirements. CDSCO
- **Adaptive or limited clinical programmes.** NDCTR enables conditional acceptance of smaller or adaptive trial evidence when disease characteristics (rarity/urgency) make large trials infeasible — again, subject to commitments. Practical implementation relies on sponsor-regulator discussions. ijclinicaltrials.com

Post-approval obligations and enforcement³⁴⁻³⁸

- **Post-marketing studies / confirmatory trials.** Accelerated/conditional approvals are paired with **mandatory** post-marketing confirmatory trials or data-submission commitments in NDCTR and CDSCO practice. The regulator may attach conditions (timeframes, study designs) and requires sponsors to complete those confirmatory studies and submit results. Failure to do so can lead to regulatory action (suspension, revocation, label changes). CDSCO+1
- **Pharmacovigilance & PSUR / risk-management plans.** CDSCO requires active pharmacovigilance systems, Periodic Safety Update Reports (PSURs), and—where applicable—Risk Management Plans (RMPs) for products with limited pre-approval data (guidance documents detail MAH responsibilities). The Pharmacovigilance Programme of India / CDSCO guidance outlines SAE reporting timelines and PV system expectations. CDSCO

- **Conditions, restrictions, and withdrawals.** CDSCO has exercised withdrawals/modifications of emergency/restricted uses when evidence changed (COVID EUA examples). This demonstrates active enforcement capability but also highlights the need for clear conditions and public transparency around commitments and timelines. CDSCO+1

Practical observations & gaps (short)³⁹

- **Positive:** NDCTR 2019 modernises India's toolbox — it explicitly contemplates accelerated approvals, orphan-drug considerations, and reliance on surrogate endpoints/bridging data where appropriate. The agency has operational experience from COVID to apply these pathways. CDSCO+1
- **Challenges / gaps:** Compassionate use/expanded access remains less formalised than in mature jurisdictions; enforcement and timely completion of confirmatory studies have been an international concern and merit monitoring in India too; clarity and public transparency (timelines, conditions, status of confirmatory trials) could be strengthened. Literature and reviews characterise India's compassionate-use regime as nascent. PMC+1

3. Operational architecture: CLA, SECs and committee-based review

Operationalizing accelerated approvals in India depends not only on written rules but on institutional processes and administrative practice. The Central Licensing Authority (CLA) and the Drugs Controller General of India (DCGI) rely heavily on technical advice from Subject Expert Committees (SECs) and other standing panels to evaluate clinical dossiers, assess the adequacy of foreign data, and recommend conditions attached to approvals. CDSCO publishes SEC meeting minutes and recommendations, including special meetings and minutes that address COVID-19 and other accelerated review cases, reflecting the centrality of SEC deliberations in real decisions about acceleration and waivers.⁴⁰ The SEC mechanism is therefore both an operational fulcrum for deciding when acceleration is appropriate and a locus where evidentiary judgement, committee composition, and procedural transparency materially affect outcomes.

4. Core elements of India's accelerated pathway practice

From a regulatory perspective, accelerated approvals in India typically involve a combination of (a) reliance on foreign clinical data or approvals (with or without local bridging data); (b) acceptance of surrogate or intermediate endpoints when direct measures of clinical benefit are not feasible in a short timeframe; (c) conditional marketing authorization subject to post-marketing commitments, including phase-IV studies or confirmatory trials; and (d) enhanced pharmacovigilance obligations. While NDCTR 2019 provides the statutory scaffold for these elements, practice is shaped by guidance documents, CDSCO-issued procedures (including SEC guidance), and precedent arising from specific product cases.⁴¹ Comparative analysis indicates that India's framework aligns with the high-level architecture of other expedited systems but diverges in the degree of publicly-specified evidentiary thresholds, the transparency of committee rationales, and the conventions governing when and how local trial waivers are granted.⁴²

5. Evidence tradeoffs and evidentiary standards

The central regulatory tension inherent in expedited pathways is the tradeoff between the societal value of speed and the need for sufficient evidence to protect patients. In practice this tradeoff plays out across several interlinked questions: Which surrogate endpoints are acceptable? What magnitude of effect on surrogates justifies conditional approval? When is foreign evidence transferable to India's population? What methodological standards and statistical thresholds should confirm benefit? The literature on NDCTR and regulatory practice in India highlights that, while mechanisms³⁰ exist for permitting surrogate-based and foreign-data-based approvals, publicly available and standardized criteria for evidentiary sufficiency are comparatively underdeveloped. This relative ambiguity can produce variability in SEC decisions and patient-access outcomes, with different applicants receiving different treatment for ostensibly similar data packages. Strengthening clarity on acceptable endpoints, minimum evidence standards, and explicit criteria for waiving local trials would reduce unpredictability and improve fairness.⁴³

6. Reliance, recognition and the role of foreign regulators

Reliance on decisions or data from established reference regulators (e.g., US FDA, EMA, PMDA) is an important lever for acceleration in many jurisdictions and is explicitly contemplated in Indian practice. Reliance can reduce duplication of assessment and shorten timelines, particularly for novel therapies where large foreign datasets exist. However, reliance raises concerns about population differences

(pharmacogenomics, co-morbidities), differences in standard of care, and potential gaps in local safety data. Indian regulators and commentators have discussed structured reliance — where foreign approvals prompt an abbreviated Indian review but require targeted local post-marketing data — as a pragmatic compromise; however, formal criteria specifying which foreign decisions qualify and what supplemental evidence is required are areas where further policy elaboration is often recommended.

7. Post-marketing surveillance and enforcement

Conditional approvals are only as effective as the systems that ensure confirmatory evidence is generated and that identified risks are monitored and acted upon. India's Pharmacovigilance Programme (PvPI) has expanded reporting and detection capacity since its founding, and NDCTR emphasizes post-marketing obligations including phase-IV studies and PMS. Nevertheless, reviews repeatedly identify gaps: limited active surveillance capacity, delays and incompleteness in confirmatory trials, variable transparency about post-marketing results, and limited enforcement tools to penalize non-compliance with commitments. Strengthening PV infrastructure, establishing measurable milestones for confirmatory studies, improving public disclosure of post-marketing outcomes, and defining sanctions for non-completion of commitments are commonly proposed reforms to make accelerated approvals credible and safe in the long term.

8. Transparency, stakeholder engagement and public trust⁴⁴

Transparency of decision-making (i.e., publishing redacted SEC rationales, conditions attached to approvals, and progress reports on confirmatory trials) is key to sustaining public and professional trust in accelerated pathways. Greater transparency helps clinicians make informed prescribing decisions, allows researchers to design complementary studies, and holds sponsors and regulators accountable. The CDSCO has made strides in publishing SEC minutes and guidance, but stakeholders and analysts still call for more systematic publication of the reasoning behind conditional approvals and clear tracking of post-authorization commitments. Robust stakeholder engagement — involving patient groups, clinicians, and industry — is also important to align expedited pathways with societal values and practical needs.

9. Illustrative experiences: emergency responses and precedent cases

The COVID-19 pandemic provided an intense stress-test for expedited regulation worldwide. In India, emergency authorizations and accelerated reviews for vaccines, therapeutics, and diagnostics highlighted both the potential of accelerated pathways to rapidly expand access and the challenges of maintaining rigorous post-authorization assessment. The pandemic experience also reinforced the importance of pre-defined emergency procedures, clear communication about the limits of pre-authorization data, and robust post-marketing surveillance to detect and manage rare adverse events. Lessons drawn from COVID-19 emphasize the need to institutionalize lessons — for example, SOPs for emergency use, clearer conditional-approval templates, and fast-track enforcement mechanisms for post-market studies.⁴⁵

10. Remaining gaps and research questions

Although important steps have been taken, several regulatory and operational gaps remain that shape research and policy priorities:

- Lack of standardized, public criteria for evidentiary thresholds (acceptable surrogates, minimum effect sizes, statistical requirements).
- Variable application and transparency of local-trial waiver decisions and reliance protocols.
- Incomplete systems for tracking and enforcing post-marketing commitments and insufficient active surveillance capacity.
- Limited systematic evaluation of whether accelerated approvals in India deliver net patient benefit compared with standard review pathways.

Addressing these gaps requires a combination of regulatory guidance, capacity building, procedural standardization, and empirical study of outcomes.⁴⁶

Key differences — short analysis

1. Evidentiary standards (what regulators will accept at approval)

- **FDA AA / EMA CMA** both permit approvals on the basis of **surrogate or intermediate endpoints** when they are “reasonably likely” to predict clinical benefit, and when disease severity/unmet need

justifies earlier access. The difference is procedural — FDA's AA historically grew from the AIDS/oncology experience and places emphasis on surrogate plausibility and confirmatory trials; EMA's CMA is statutory and explicitly time-limited (1 year) pending confirmatory data. U.S. Food and Drug Administration⁺¹

- **Breakthrough / PRIME** are *development-acceleration* designations: they do **not** change the statutory approval standard per se but steer development to collect the kinds of evidence that regulators will accept faster (e.g., early agreement on surrogate endpoints and trial design). U.S. Food and Drug Administration⁺¹

2. Reliance on surrogate endpoints

- Both AA and CMA explicitly allow surrogate endpoints; many accelerated approvals in oncology rely on response rates or progression-free survival rather than overall survival. This speeds approvals but increases uncertainty about true clinical benefit—empirical analyses have shown a substantial fraction of AA/CMA approvals later demonstrate limited added therapeutic value. (See cohort analyses). U.S. Food and Drug Administration⁺¹

3. Post-marketing commitments and enforcement⁴⁷

- All systems pair earlier approval with **mandatory confirmatory obligations**. The regulatory difference is enforcement intensity and transparency: FDA has statutory tools to withdraw approvals but has faced criticism for delays in enforcement when confirmatory trials lag; EMA's CMA is explicitly temporary (renewable annually) which gives a clear statutory cadence to require data. Comparative research indicates confirmatory-trial completion is a persistent problem across jurisdictions. U.S. Food and Drug Administration⁺²European Medicines Agency (EMA)⁺²

4. Timelines & procedural support

- **EUA** (FDA) is for emergencies and can be implemented very rapidly but is temporary and conditioned on ongoing evidence collection.
- **PRIME/BTR** accelerate development and regulatory interaction (meetings, advice), while AA/CMA accelerate *approval* given a defined evidentiary package. PRIME can also lead to formal accelerated assessment (shorter EMA timetables). U.S. Food and Drug Administration⁺¹

5. Transparency

- EMA tends to make CMA conditions and EPARs publicly available and maintains renewable one-year reviews, which supports transparency about outstanding evidence. FDA publishes approval basis documents and has improved transparency recently but has been criticized in the literature for variable public clarity on confirmatory-trial status and enforcement timelines. Independent studies show only a minority of AA/CMA approvals deliver high added therapeutic value — an argument for better public reporting. European Medicines Agency (EMA)⁺²U.S. Food and Drug Administration⁺²

Practical lessons India can adopt/adapt

Below are actionable items India could consider, with brief rationale:

1. Adopt a clear, time-limited conditional authorisation model (EMA-style) for conditional approvals

- Make conditional approvals explicitly time-limited (e.g., 12 months, renewable) with milestones and public reporting of renewal/fulfillment status. This creates a statutory cadence for reassessment and clearer enforcement levers. Rationale: EMA's CMA forces periodic review and makes obligations explicit. European Medicines Agency (EMA)

2. Strengthen and publish a central register for accelerated/conditional approvals and the status of confirmatory trials

- Require sponsors to register confirmatory trials on a public registry and publish an accessible CDSCO status dashboard (trial start/completion, interim results, renewals, withdrawals). Rationale: Transparency improves public trust and enables independent monitoring—an area where FDA/EMA experiences showed room for improvement. U.S. Food and Drug Administration⁺¹

3. Formalise a PRIME-like early-support scheme to align sponsors and regulators on acceptable surrogate endpoints and confirmatory plans

- Offer pre-submission packages, rolling review windows and targeted scientific advice for priority medicines (oncology, rare diseases, antimicrobials). Rationale: Coordinated early advice reduces later delays and improves the quality of pre-approval evidence; EMA's PRIME and FDA's Breakthrough examples show value. European Medicines Agency (EMA)⁺¹

4. Make post-marketing commitments legally enforceable and tie conditional status to concrete incentives/penalties

- Link continued marketing to timely completion of confirmatory trials (penalties, automatic review triggers, or sunset clauses). Rationale: Global experience shows many confirmatory trials are delayed; enforceable mechanisms encourage completion. CMA's renewable model offers a blueprint; the FDA's withdrawal authority is a complementary enforcement tool. European Medicines Agency (EMA)⁺¹

AIM AND OBJECTIVE

Aim:

To critically evaluate the regulatory framework, implementation practices, and challenges associated with accelerated drug approval pathways in India for life-threatening and serious conditions, and to compare them with global models in order to identify gaps, opportunities, and recommendations for policy strengthening.

OBJECTIVES

1. **To review** the existing legal and regulatory provisions governing accelerated and conditional drug approvals under the *New Drugs and Clinical Trials Rules (NDCTR), 2019* and related CDSCO guidance documents.
2. **To analyze** key case studies (e.g., Remdesivir, Favipiravir, and orphan/oncology drugs) approved under emergency or expedited mechanisms in India, assessing the scientific and procedural basis of such approvals.
3. **To compare** India's accelerated approval framework with those of major regulatory authorities such as the U.S. FDA (Accelerated Approval, Breakthrough Therapy Designation), EMA (Conditional Marketing Authorization), and PMDA (Japan).
4. **To identify** regulatory, ethical, and operational challenges in implementing accelerated approval mechanisms in India, including evidentiary standards, surrogate endpoints, and post-marketing surveillance.
5. **To assess** the impact of these pathways on patient access, drug safety, and clinical outcomes in life-threatening disease settings.
6. **To propose** policy recommendations and capacity-building measures to strengthen India's accelerated approval framework while maintaining scientific rigor and patient safety.

CONCLUSION:

The accelerated drug approval pathway represents a vital mechanism to facilitate early access to innovative and life-saving therapies for patients suffering from serious or life-threatening conditions. In India, the *New Drugs and Clinical Trials Rules (NDCTR), 2019* established a formal legal foundation for expedited and conditional approvals, reflecting the government's intent to align with global regulatory standards and to reduce drug-lag. However, the practical implementation of these provisions remains at a formative stage, with gaps in evidentiary criteria, post-marketing surveillance, and transparency.

The experience gained during the COVID-19 pandemic—through emergency and restricted use authorizations of drugs such as remdesivir and favipiravir—highlighted both the potential and the limitations of India's accelerated approval mechanisms. While such decisions enabled timely therapeutic access, they also underscored the need for clearer technical guidance on surrogate endpoints, stronger confirmatory study enforcement, and consistent public disclosure of regulatory decisions.

Comparative evaluations with established frameworks such as the U.S. FDA's Accelerated Approval and the EMA's Conditional Marketing Authorization reveal that India's pathway can be strengthened through greater procedural clarity, capacity building within CDSCO, and structured reliance

on real-world evidence. Ensuring scientific rigor while expediting approvals demands a balance between regulatory flexibility and accountability.

In conclusion, accelerated approval pathways are indispensable tools in a modern regulatory ecosystem, particularly for diseases with high unmet medical need. For India, the way forward lies in developing detailed technical guidance, establishing specialized review divisions, reinforcing post-marketing data systems, and promoting transparent communication between regulators, industry, and the public. A well-defined and consistently implemented accelerated approval framework will not only enhance patient access to critical therapies but also bolster India's credibility as a globally trusted regulatory authority.

ACKNOWLEDGEMENT:

The Authors are thankful to Sura Labs, Dilshukhnagar, Hyderabad for providing the necessary facilities for the research work.

REFERENCES

1. Wouters OJ, McKee M, Luyten J. Estimated research and development investment needed to bring a new medicine to market, 2009–2018. *JAMA*. 2020;323(9):844–53. <https://doi.org/10.1001/jama.2020.1166>
2. Wong CH, Siah KW, Lo AW. Estimation of clinical trial success rates and related parameters. *Biostatistics*. 2019;20(2):273–86. <https://doi.org/10.1093/biostatistics/kxx069>.
3. Roberts TG, Chabner BA. Beyond fast track for drug approvals. *N Engl J Med*. 2004;351(5):501–5.
4. US, Food and Drug Administration. Project Orbis. <https://www.fda.gov/about-fda/oncology-center-excellence/project-orbis>. Accessed 23 June 2022.
5. Swissmedic Guidance document. Project Orbis HMTV4. Version 3.
6. MHRA website. <https://www.gov.uk/guidance/guidance-on-project-orbis>.
7. Health Canada website. <https://www.canada.ca/en/health-canada/services/drugs-health-products/international-activities/projectorbis.html>.
8. TGA website: <https://www.tga.gov.au/project-orbis>.
9. ANVISA website. <https://www.gov.br/anvisa/pt-br/assuntos/noticias-anvisa/2020/anvisa-agora-e-parceira-do-projeto-orbis>.
10. de Claro AR, Spillman D, Hotaki LT, et al. Project orbis: global collaborative review program. *Clin Cancer Res*. 2020. <https://doi.org/10.1158/1078-0432.CCR-20-3292>.