CIRM
CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE

Memorandum

To: Members of the Accessibility and Affordability Working Group

From: Rosa Canet-Avilés, PhD. CSO and Interim Patient Access Team Lead, Shyam Patel, Associate Vice President Preclinical Development, and Joseph Gold, PhD. Senior Director Clinical Development

Re: **Access and Affordability (A&A) Implementation in Preclinical and Clinical Development programs**

Date: 04/30/2025

BACKGROUND

The CIRM team, in collaboration with the Access and Affordability Working Group (AAWG), is charged with developing and assisting with the implementation of financial models to support the accessibility and affordability of treatments and cures arising from institute-funded research for Californians.[1] Pursuant to this charge, CIRM has worked closely with the AAWG and its chair to identify opportunities to enhance access to clinical trials and resulting products generally. To that end, to date, the AAWG has recommended the establishment of the CIRM Patient Support Program[2] and the Community Care Centers of Excellence.[3]

In August 2024, the AAWG evaluated a range of health economics, access planning, and policy options to inform the implementation of CIRM's Strategic Allocation Framework (SAF)—a data-driven model for prioritizing resource allocation to maximize the agency's impact during the remaining years of the Strategic Plan. The AAWG was asked to consider potential access and reimbursement strategies for late-stage clinical trials and approved therapies. During the meeting, the working group endorsed CIRM's proposed strategic aim: that every CIRM-funded project completing a late-stage clinical trial must have a clear, feasible strategy to enable access and affordability for all California patients, particularly those from underserved populations.

AAWG members considered and discussed a variety of implementation options, including incorporating value-based pricing and health economic analyses into access plans, incentivizing scalable manufacturing technologies, and fostering strategic partnerships with Medi-Cal, cancer centers, and community-based networks. They emphasized the need for a staged approach—beginning with early signals around cost and manufacturability in preclinical and early clinical stages, while requiring robust access strategies in late-stage development. Members also highlighted the importance of involving health economists in program design, exploring alignment with California legislation such as the Cancer Care Equity Act, and ensuring that access strategies are adaptable, measurable, and grounded in health equity.

In response to the AAWG recommendations, CIRM engaged a broad set of expert stakeholders across academia, industry and policy to identify potential partners with the expertise to support the development of this accessibility and affordability framework for incorporation into CIRM's

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[1] The California Stem Cell Research, Treatments, and Cures Initiative of 2020 Section: *125290.75. Treatments and Cures Accessibility and Affordability Working Group*

[2] https://www.cirm.ca.gov/agendas/07222022-august-accessibility-and-affordability-working-group/

[3] https://www.cirm.ca.gov/agendas/march-10-accessibility-and-affordability-working-group-meeting/

research and development programs. Through this outreach process, CIRM received three strong proposals and ultimately selected BlueRidge Life Sciences to develop tools and methodologies aimed at enhancing accessibility and affordability of CIRM-funded therapies. The goal is to support thoughtful planning across CIRM's preclinical and clinical-stage programs to ensure that innovative treatments reach the patients who need them most. Over the past few months, through this collaborative partnership we have develop a draft framework for this purpose.

OBJECTIVE

The objective of this discussion is for the AAWG to review and provide input on the draft tools developed to support access and affordability planning across CIRM's preclinical and clinical-stage funding programs. These tools include:

- A **checklist** of key activities related to access, affordability, and payer readiness, tailored by development stage and activity type.
- A **rubric** for evaluating access planning during application review and award management, supporting consistent, transparent decision-making.
- **Guidance documents** to help applicants understand expectations, available support, and best practices.

The above tools are designed to provide structure and clarity for applicants and reviewers while remaining flexible to accommodate scientific and programmatic considerations. The AAWG's input will help ensure these materials are appropriate, actionable and aligned with the evolving healthcare landscape.

TOOLKIT COMPONENTS

1. The **Checklist** (see Appendix A and B for details) outlines key commercialization-related **activities** across **four functional areas** that may directly or indirectly influence patient **access and affordability** of cell and gene therapies:

    a. Market Access
    b. Commercialization
    c. Health Economics and Outcomes Research (HEOR)
    d. Medical Affairs

Each activity is categorized based on its importance at different stages of development (preclinical to Phase 3/BLA) and is marked as:

- Must Have
- Should Have
- Nice to Have

Activities are also classified as either **pre-requisite** (to be addressed before application) or **milestone** (to be addressed during the course of the award). The checklist ensures applicants are thinking early and proactively about the practical elements that determine whether a successful therapy ultimately reaches patients.

2. To support transparency and consistency in review, an **Evaluation Rubric** (see Appendix A and B for details) has been developed for evaluating applicants' access and commercialization planning:

- Preclinical applications will be reviewed by the Grants Working Group (GWG) using the rubric
- Clinical-stage applications will be reviewed by the GWG in consultation with external experts in HEOR and commercialization, particularly as complexity increases with development phase

Each activity will be assigned a raw score by the reviewers contributing to a **composite score** that reflects readiness and feasibility of access planning. This scoring model supports transparent evaluation and informed decision-making.

The feedback received during the review will be used both at the time of application and, where relevant, for setting award milestones and monitoring.

3. Guidance Documents (see Appendix C**)**

Accompanying materials will help applicants, reviewers, and staff align on expectations. These include:

- Definitions of each checklist activity
- Examples of phase-appropriate implementation
- Recommendations for documentation and milestone planning
- Best practices for patient access and affordability integration

These resources are being finalized and will be included in application materials for future PDEV and CLIN2 rounds.

IMPLEMENTATION PLAN

The toolkit will be piloted in the upcoming rounds of PDEV and CLIN2 programs, with internal staff and reviewers trained on its use. Awardees will be expected to achieve stage-appropriate milestones aligned with the checklist, with award monitoring to ensure progress.

To ensure transparency and support adoption, we are considering:

- A public-facing webinar for applicants
- Ongoing refinement of tools based on user feedback

Requested Action: We respectfully request that the AAWG review and approve the proposed toolkit, including the checklist, evaluation rubric, and guidance documents, to enable implementation of access and affordability planning in CIRM's Preclinical Development (PDEV) and Clinical Stage (CLIN2) funding programs. Your endorsement will support consistent application of these materials across CIRM's portfolio and reinforce our shared commitment to ensuring Californians can access the innovative treatments we help move forward.

Cell and Gene Therapy (CGTx) Checklist for Commercialization Activities and Scoring Tool

Pre-clinical

Directions: Cells in a light **orange** color may be updated by user. All other cells to be left unchanged.
1) Select Stage of development (Cell B3).
2) Optional: Filter the respective development stage (column J, K, L or M) for non blank cells.
3) Select Activity Score (Column N).

Priority Level Key	Low (Nice to Have)	Medium (Should Have)	High (Must Have)

Scoring System
0=Not started
1=Reasonably planned
2=In process/partially completed
3=Completed but insufficient
4=Completed but needs updating
5=Completed in last 12 months

Timing of activity	Activity name	Activity Owner	Activity description	Benefits of undertaking activity	Barriers to executing activity	Overcoming barriers	Supports Access/Affordability	Timing of Activity				Raw Score	Raw Score Weighting	Level of Priority	Weighted Score
								Pre-clinical	Phase 1	Phase 2	Phase 3				
Pre-clinical/1/2/3	Market landscape assessment/market research	Market Access	Conducting detailed market research to assess the potential demand, competition, pricing strategies, and market gaps.	Understanding the size of the market, potential customers, unmet needs, and potential barriers to entry.	The cost of preclinical market research can be perceived as prohibitively expensive and very time consuming for small companies or start-ups and often there is only one person in the company with commercial responsibilities. Some perceive this activity as unnecessary in the pre-clinical stage.	Perform in-house research reaching out to providers/payers/advocacy groups, and other key stakeholders. Utilize free online industry reports to inform market assessment. Consider minimal investment options for acquiring therapeutic area/industry market reports.	Possible					0	0	2	0
Pre-clinical/1/2/3	Reimbursement and market access strategy	Market Access	Planning for the product's reimbursement strategy by assessing the healthcare landscape, payer preferences, and pricing models.	Early understanding of the product's economic value to health systems and key stakeholders is important for successful adoption in the market. During clinical stages outline an evidence generation plan for a product to ensure the "right" data will be available for regulators and reimbursement authorities to justify value and pricing.	Accessing reliable, evidence including real-world data to inform pricing and reimbursement decisions can be challenging. Rare diseases may have additional challenges such as not having codes required for diagnosis and reimbursement. The treatment paradigm and reimbursement landscape may evolve by the time of launch.	Ensure market research is executed highlighting where the product fits into the clinical paradigm. Conduct early pricing studies to understand the price corridor that might be acceptable from the perspective of payers and providers given the attributes of the TPP. Early engagement with payers to understand access hurdles (e.g., prior authorizations); understand impacts the new product might have on provider practice in order to facilitate adoption. Continue monitoring and refinement of strategy as the product goes through the development process.	Yes					2	0.4	1	0.4
Phase 1/2/3	Early revenue and market forecast	Commercialization	Develop early market and revenue forecasts using published evidence and qualitative primary research to understand the target population, peak market share, pricing and resulting revenues.	These analyses are refined throughout the development process and useful for negotiating potential licensing agreements.	Early forecasts will be rudimentary, and largely based on crude hypothetical assumptions. More robust forecasts require an evidence-based understanding of the therapeutic area, available treatments, and where the asset fits in the clinical paradigm. Additionally, insights are needed to understand potential market shares and pricing assumptions.	Document key assumptions for early forecasts that are developed inhouse - these assumptions can be validated or refined during subsequent market research. Refine forecasts during the clinical development cycle by conducting robust secondary and primary market research using the TPP, understand where the product fits into the clinical paradigm, and gain insights from IDIs regarding how the product will be perceived, potential market share and price range. Work with a market access/strategy consulting firm with expertise in developing forecasts.	Possible					2	0.4	0	0
Phase1/2/3	Brand strategy and positioning	Commercialization	Starting the process of brand development, including naming and positioning the drug in the marketplace. Understand how a product is differentiated in the market.	Lay the foundation for future value message development and what drivers of value are important to physicians, patients, payers and other stakeholders. Attract funding to support future development.	Early product positioning will be largely hypothesis driven given the lack of available/robust evidence. Not understanding the product's place in the clinical paradigm, potential value to patients, payers and providers. As the product nears the end of phase 3 clinical studies, the branding will be dependent on completing the value message development activity.	Ensure market research is executed highlighting where the product fits into the clinical paradigm; research with payers and providers will give insight into how the product will be perceived. Early in the development process, establish a clear vision for the product outlining the unmet need and how the product will meet the need. Later in the development process, develop a brand strategy that identifies the target patients/providers, define the brand by what messages are to be communicated, and lastly develop a positioning statement. This activity will require the value message development to be completed.	Possible					2	0.4	0	0
Phase1/2/3	Market segmentation	Market Access	Segregate potential customers (e.g., patients/providers/payers) into groups based on different characteristics (e.g., geography, demographics, behaviors, etc.).	Key benefits include the ability to optimize marketing effort, enhance adoption and brand competitiveness.	Lack of data to be able to look at geography, demographics, and behaviors of the different stakeholders.	Identify datasets that allow for identification of site of service and HCP prescribing behaviors.	Yes					2	0.4	0	0
Phase2/3	Establish (clinical and payer) advisory board	Commercialization	Identify key opinion leaders who could serve as advisers. Periodically seek feedback on clinical and economic evidence generation efforts. Periodically develop content for advisors to review and provide feedback to support the development process.	Clinical and payer KOLs offer expert advice as the development program progresses through the clinical stages of development through commercial launch.	Identifying KOLs and logistics of identifying availability of multiple advisors with busy schedules. KOLs will need independent contractor agreements (incl CDAs) and the sponsor will need to report on honoraria, travel, accommodation and other expenses for compliance reasons. Shared materials typically require legal approval of content and attendee ratios. Ensure the meeting meets objectives.	Develop logistics to follow relevant company and local rules and laws when organizing an advisory board meeting. Consider outsourcing the organization, logistics, agenda, content development and meeting out-put analysis/reporting to a contractor to assist unless in-house company support is available.	Possible					2	0.4	0	0
Phase2/3	Value message	Market Access	Develop value messages that communicate key drivers of value, which is supported by evidence that help differentiate a therapeutic in the marketplace.	Value messages help clearly communicate the benefits of a drug to various stakeholders, including regulators, payors, healthcare providers, and patients. This ensures that everyone understands the therapeutic and economic value of the drug.	Not incorporating key stakeholder input early in the evidence generation process (i.e. Phase I), so that Phase 2 and pivotal trials contain the right data to support a strong value proposition. At the frontend of the development process a TPP is developed to begin formulating the key benefits and areas of differentiation for a drug. It is essential to have developed the key data to support each value message in parallel with the clinical development process.	Conduct early market research (i.e. pre-clinical or Phase 1) into the market landscape, unmet needs, and disease burden. Developing the TPP and evidence generation plan, early economic modeling will all contribute to charting the path to developing the right data required to support justifying the value and pricing of a product. Refine messaged as the product moves through the development stages. Conducting Advisory board meetings are useful for testing what data and messages resonates most with key stakeholders in terms of communicating the value of a product.	Possible					2	0.4	0	0
Phase2/3	Patient journey	HEOR	Develop a detailed pathway documenting the patient experience and healthcare service delivery from the point of a patient symptom on-set through diagnosis, treatment and management.	Developing a patient journey helps identifying pain points (unmet needs) and areas for improvement that a new treatment might alleviate and potentially lead to a more seamless and positive patient/provider/payer experience.	Integrating and accessing data from various sources, such as electronic health records, patient surveys, and clinical trials, can be difficult.	Engage with experts with experience in integrating data from diverse sources to streamline the process.	Yes					2	0.4	0	0
Phase2/3	Value communication dossiers	Market Access	Development of AMCP dossier for the US (pre-approval/final approved versions) and HTA submission dossiers for Ex-US markets	As part of the technology assessment US payers typically request an AMCP dossier for new interventions. Other HTA bodies have a different dossier format to communicate similar content, although it is usually more detailed.	Sensitivity to sharing pre-approval information (e.g. clinical study report, final label and launch pricing) Not having a fleshed-out value story. Sensitivities to sharing sensitive data from clinical studies or delays in internal socialization of study data.	Ensure available evidence is collected (e.g. market research, SLR, ITC, model reports, clinical study report, pre-launch label, value messages). At minimum, have a draft/pre-launch version developed that can be quickly updated once the price is official (frequently this happens at launch).	Possible					2	0.4	0	0

Phase3	Quantitative pricing studies	Market Access	Conduct a robust conjoint analysis to understand the impact of product attributes have on price from the perspective of payers and other key stakeholders.	Understand the market acceptable price given demonstrated product attributes. Ability to optimize price and market share to maximize revenues.	Quantitative pricing studies require a large sample size of participants and can be very costly to execute due to development and programming of a pricing and attribute survey. Also in rare diseases it may not be sufficient participants to construct a large enough sample for the analysis. Risk of participant not being qualified for participating and leading to potential for erroneous data.	In rare/ultrarare disease areas leverage other research studies (e.g. CEA, BIM, advisory boards, qualitative pricing research) to inform pricing decisions. In other cases, wait for the development program to reach Phase 3 and initial pivotal data becomes available. At this point the investment risk is minimized by the product reaching the end-stage of development. Work with a vendor with access to large numbers of HCPs and payers for recruitment, and with expertise of programming surveys for simple data collection. Build in safeguards such as screening questions as part of the survey design to minimize risk of unreliable data.	Yes		2	0.4	0	0
Phase3/ Registration	Establish patient registry/Risk-evaluation strategy (post launch)	HEOR	Develop a registry for patients to collect long-term, real-world data on the safety, efficacy, and outcomes of CGTx or best supportive care or usual care.	Enables monitoring of patients treated (or not treated) with a cell or gene therapy over the long-term. Enables quantification and validation of long-term treatment effects including duration of effect an other unknowns at the time of launch. Regulatory authorities, such as the FDA and EMA, often mandate the use of patient registries to monitor post-authorization safety and efficacy of CGTx drugs. Results may affect reimbursement decisions post-launch. Can be used to continuously further the evidence base of the disease area by publishing observed outcomes.	Aligning on the variables and outcomes to collect. Costly to design, implement and maintain, which for CGTx therapies could be a decade or more for follow-up.	Develop a study plan, protocol and project plan that outlines the scope, purpose/objectives, timeline, patient populations, interventions, outcomes. Assign responsibilities, personnel (incl advisory board), facilities, resource commitment, and contractors to execute and monitor the registry over time. Extract value from the registry from analysis of outcomes and publishing results.	Yes		2	0.4	0	0
Phase2/3	Pre-approval information exchange (PIE)	Market Access	Develop a presentation to proactively share and educate Payers in the US about certain health care economic and scientific information about a new emerging products.	Market readiness tool that is used to facilitate early market access conversations with payers before Food and Drug Administration (FDA) approval. Helps prepare the market for anticipated place in therapy, pricing, clinical trial results, potential indication, and anticipated timeline for FDA approval.	Requires internal process for regulatory review and approval of materials to be shared externally with payers and other HCEI audiences. Sensitivity to share pricing information pre-launch.	Ensure there is evidentiary support for the HCEI to comply FDA regulations. Internal training/education on benefits and socialization of best practices on sharing pre-approval HECI as a way to overcome sensitivities to keeping information confidential until launch.	Possible		2	0.4	0	0
		1						1	1	1	1	Total Composite Score	0

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CGTx Commercialization Checklist for CIRM Grants

AAWG Supplemental Material

April 30, 2025

Commercial activities

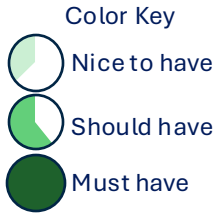
Objective

- Develop guideline commercialization activities for cell and gene therapy grantees from preclinical development to Biologics License Application (BLA)

Guideline activities may be used for:

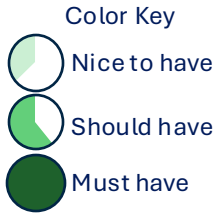
- Internal CIRM or grantee education on what to expect for typical commercial activities and the timing of these activities during the development cycle
- CRIM to use commercial activities checklist for evaluation and awarding of grants

Pre-clinical – Commercial activities by level of importance



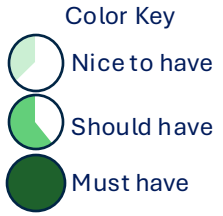
Activity Owner	Pre-clinical	Phase 1	Phase 2	Phase 3
Commercial	Intellectual property strategy Financial planning Briefing document Pre IND meeting Technology Transfer Regulatory pathway strategy Partnerships and collaborations			
Market Access	Market landscape assessment/market research Target product profile Reimbursement and market access strategy			
HEOR				
Medical Affairs	Proof of concept clinical trial design			

Phase 1 – Commercial activities by level of importance



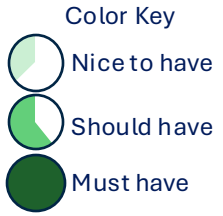
Activity Owner	Pre-clinical	Phase 1	Phase 2	Phase 3
Commercial		Intellectual property strategy Financial planning Technology Transfer Regulatory pathway strategy Partnerships and collaborations Early revenue and market access Brand Strategy and positioning		
Market Access		Market landscape assessment/market research Target product profile Reimbursement and market access strategy Market segmentation		
HEOR		Establish natural history of disease Cost of illness and standard of care Quality of life assessment Early economic modeling Briefing book		
Medical Affairs		Proof of concept clinical trial design Scientific platform		

Phase 2 - Commercial activities by level of importance



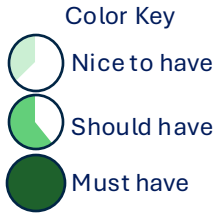
Activity Owner	Pre-clinical	Phase 1	Phase 2	Phase 3
Commercial			Intellectual property strategy Financial planning Regulatory pathway strategy Partnerships and collaborations Early revenue and market access Brand Strategy and positioning Establish (clinical/Payer) advisory board	
Market Access			Market landscape assessment/market research Target product profile Reimbursement and market access strategy Market segmentation Value message Value communication dossier	
HEOR			Establish natural history of disease Cost of illness and standard of care Quality of life assessment Early economic modeling Briefing book HTA ready cost-effectiveness analysis Patient journey Indirect treatment comparison	
Medical Affairs			Scientific platform	

Phase 3 – Commercial activities by level of importance



Activity Owner	Pre-clinical	Phase 1	Phase 2	Phase 3
Commercial				Intellectual property strategy Financial planning Regulatory pathway strategy Partnerships and collaborations Brand Strategy and positioning Establish (clinical/Payer) advisory board
Market Access				Market landscape assessment/market research Target product profile Reimbursement and market access strategy Market segmentation Value message Value communication dossier Quantitative pricing study Pre-approval information exchange (PIE)
HEOR				Cost of illness and standard of care Quality of life assessment HTA ready cost-effectiveness analysis Patient journey Indirect treatment comparison Budget impact analysis Systematic literature review Establish patient registry
Medical Affairs				Scientific platform

Overview – Commercial activities by level of importance



Activity Owner	Pre-clinical	Phase 1	Phase 2	Phase 3
Commercial	Intellectual property strategy			
	Financial planning			
	Briefing document Pre IND meeting			
	Technology Transfer			
	Regulatory pathway strategy			
	Partnerships and collaborations			
	Early revenue and market access			
	Brand Strategy and positioning			
	Establish (clinical/Payer) advisory board			
Market Access	Market landscape assessment/market research			
	Target product profile			
	Reimbursement and market access strategy			
	Market segmentation			
	Value message			
	Value communication dossier			
	Quantitative pricing study			
	Pre-approval information exchange (PIE)			
HEOR	Establish natural history of disease			
	Cost of illness and standard of care			
	Quality of life assessment			
	Early economic modeling			
	Briefing book			
	HTA ready cost-effectiveness analysis			
	Patient journey			
	Indirect treatment comparison			
	Budget impact analysis			
	Systematic literature review			
	Establish patient registry			
Medical Affairs	Proof of concept clinical trial design			
	Scientific platform			

Commercial activities are grouped by activity owner, timing when the activity may commence and level of importance

Commercial activity owners and stages

Activity owner or functional area:

- Commercialization
- Market Access
- Health Economics and Outcomes Research (HEOR)
- Medical Affairs

Timing of activities are according to the development process:

- The importance of each activity is classified into three distinct categories and color coded accordingly:

Priority Level		
Low	Nice to have	
Medium	Should have	
High	Must have	

Depending on the development stage, each activity will have a different level of priority and therefore scored accordingly

Scoring of activities by stage and functional area

- A priority factor is assigned to each activity:

Priority Level	Priority Factor
Not needed for stage	0
Low (Nice to have)	1
Medium (Should have)	2
High (Must Have)	3

- A raw score is assigned to each activity reflecting the status of the activity - **this factor is assigned by user**:

Priority Level	Raw Score
Not Started	0
Reasonably planned	1
In process/partially completed	2
Completed but insufficient	3
Completed but needs updating	4
Completed in last 12 months	5

- In total there are 30 commercial activities expected to occur over the course of the development process
  - Many of the activities will span multiple development stages
  - Typically, the level of priority will increase as the asset progresses toward Phase 3 clinical trials and beyond
- Number of activities by development stage and functional area

	Pre-clinical	Phase 1	Phase 2	Phase 3
Commercial	6	7	7	6
Market Access	3	4	6	8
HEOR	0	5	8	8
Medical Affairs	1	2	1	1
Total by development stage	**10**	**18**	**22**	**23**

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A total composite score is a cumulative result of the overall status of commercial activity

Commercial activity score weighting

- A composite commercial activity score is calculated using the following formula:

Composite commercial activity score:

$$\sum_{1}^{n}\left(\frac{(Priority\ Score)_{Activity\ n} \times (Raw\ Score)_{Ativity\ n}}{5}\right)$$

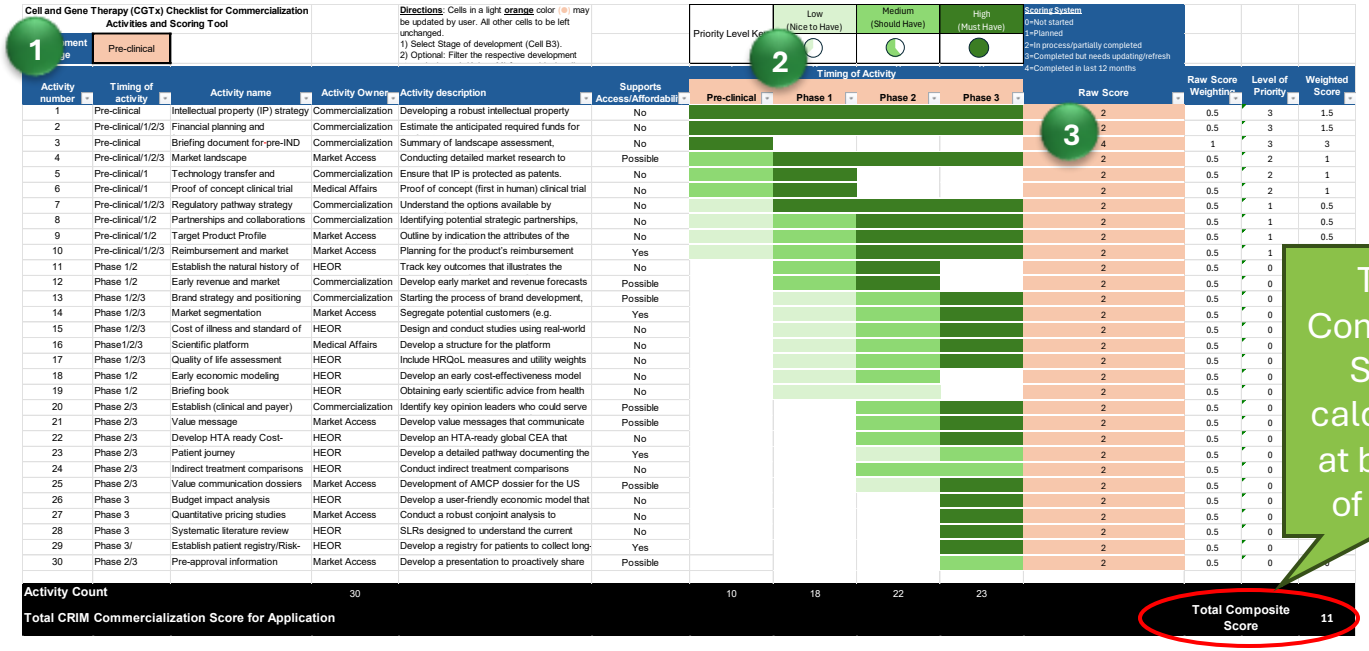
Note: the denominator is 5 so the top raw score assignment (raw score range 0-5) will be fully weighted

CIRM may use the composite scores to make funding decisions

- An Excel tool was developed to facilitate calculating the composite score for commercial activities

Directions: Cells in a light orange color (●) may be updated by user. All other cells to be left unchanged.

1. Select Stage of development (Cell B3).
2. Optional: Filter the respective development stage (column J, K, L or M) for non-blank cells.
3. Select Activity Score (Column N).



Appendix

Access and Affordability Activity Details

Commercial Activity:
Reimbursement and market access strategy

Activity Description:

Planning for the product's reimbursement strategy by assessing the healthcare landscape, payer preferences, and pricing models.

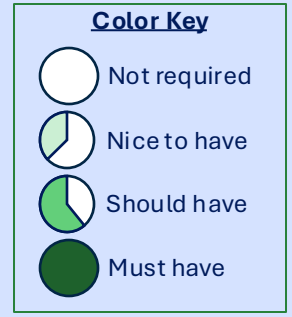
Risk from Incomplete activity:

After a product receives market authorization, manufacturers must secure reimbursement to ensure market access. Although they can set list prices, actual access depends on a positive reimbursement decision following a cost-effectiveness evaluation. Without a strong reimbursement strategy, insurers may limit access, resulting in financial losses, reduced adoption, and fewer patients benefiting from the therapy. If affordability isn't prioritized, high out-of-pocket costs can lead to poor adherence, treatment discontinuation, and negative public perception

Benefits	Barriers	Overcoming
• Early understanding of the product's economic value to health systems and key stakeholders is important for successful adoption in the market. • During clinical stages outline an evidence generation plan for a product to ensure the "right" data will be available for regulators and reimbursement authorities to justify value and pricing.	• Accessing reliable, evidence including real-world data to inform pricing and reimbursement decisions can be challenging. • Rare diseases may have additional challenges such as not having codes required for diagnosis and reimbursement. • The treatment paradigm and reimbursement landscape may evolve by the time of launch.	• Ensure market research is executed highlighting where the product fits into the clinical paradigm. • Conduct early pricing studies to understand the price corridor that might be acceptable from the perspective of payers and providers given the attributes of the TPP. • Early engagement with payers to understand access hurdles (e.g., prior authorizations); understand impacts the new product might have on provider practice in order to facilitate adoption. • Continue monitoring and refinement of strategy as the product goes through the development process.

Priority by phase

Pre-clinical	This is a nice to have activity in the Pre-clinical stage, a should have by Phase 1 and a must have in Phase 2 and beyond.
Phase 1	
Phase 2	
Phase 3	



Commercial Activity:
Market segmentation

Activity Description:

Segregate potential customers (e.g., patients/providers/payers) into groups based on different characteristics (e.g., geography, demographics, behaviors, etc.).

Risk from Incomplete Activity:

Understanding market segments is essential for creating effective marketing strategies, product positioning, and messaging that connect with the right audience. Poor segmentation can weaken marketing impact and limit product adoption. It may also lead to wasted resources by targeting unprofitable segments or those with low unmet needs. Ultimately, this can result in mispricing and reduced profitability.

Benefits	Barriers	Overcoming
• Key benefits include the ability to optimize marketing effort, enhance adoption and brand competitiveness.	• Lack of data to be able to look at geography, demographics, and behaviors of the different stakeholders	• Identify datasets that allow for identification of site of service and HCP prescribing behaviors.

Priority by phase

Pre-clinical

Phase 1

Phase 2

Phase 3

This is a nice to have activity in Phase 1, a should have in Phase 2 and a must have in Phase 3.

Color Key

- Not required
- Nice to have
- Should have
- Must have

Commercial Activity:
Quantitative pricing studies

Activity Description:

Conduct a robust conjoint analysis to understand the impact of product attributes have on price from the perspective of payers and other key stakeholders.

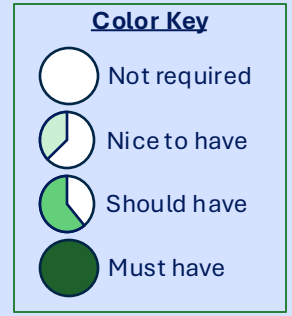
Risk from Incomplete Activity:

Manufacturers generally have flexibility in setting drug prices, but market access depends on receiving a positive reimbursement decision after a cost-effectiveness assessment. If a therapy is priced too high, insurers and health technology assessment (HTA) bodies may limit or deny reimbursement, restricting patient access. This limited access can lead to financial losses, reduced adoption, and prevent patients from receiving critical treatments. Additionally, poor affordability may result in low adherence, negative public perception, and limited market penetration.

Benefits	Barriers	Overcoming
• Understand the market acceptable price given demonstrated product attributes. • Ability to optimize price and market share to maximize revenues.	• Quantitative pricing studies require a large sample size of participants and can be very costly to execute due to development and programming of a pricing and attribute survey. • In rare diseases there may not be sufficient participants to construct a large enough sample for the analysis. • Risk of participant not being qualified for participating and leading to potential for erroneous data.	• In rare/ultrarare disease areas leverage other research studies (e.g. CEA, BIM, advisory boards, qualitative pricing research) to inform pricing decisions. • In other cases, wait for the development program to reach Phase 3 and initial pivotal data becomes available. At this point the investment risk is minimized by the product reaching the end-stage of development. • Work with a vendor with access to large numbers of HCPs and payers for recruitment, and with expertise of programming surveys for simple data collection. • Build in safeguards such as screening questions as part of the survey design to minimize risk of unreliable data.

Priority by phase

Pre-clinical	This is a must have in Phase 3.
Phase 1	
Phase 2	
Phase 3	



Commercial Activity:
Patient journey

Activity Description:

Develop a detailed pathway documenting the patient experience and healthcare service delivery from the point of a patient symptom on-set through diagnosis, treatment and management.

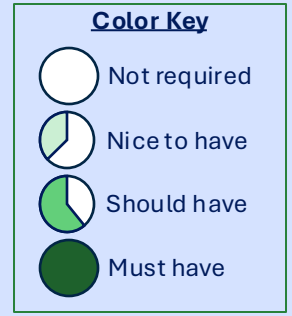
Risk from Incomplete Activity:

Without a well-developed patient journey, manufacturers risk missing important unmet needs of patients, providers, and payers, leading to sub-optimal product development and support services. These gaps are missed opportunities to improve care delivery and address key challenges. Poor understanding of the patient journey can also lead to weak patient engagement and insufficient support during treatment. As a result, patient access may decline, ultimately affecting sales and product success.

Benefits	Barriers	Overcoming
• Developing a patient journey helps identifying pain points (unmet needs) and areas for improvement that a new treatment might alleviate and potentially lead to a more seamless and positive patient/provider/payer experience.	• Integrating and accessing data from various sources, such as electronic health records, patient surveys, and clinical trials, can be difficult.	• Engage with experts with experience in integrating data from diverse sources to streamline the process.

Priority by phase

Pre-clinical	This is a should have activity in Phase 1 and a must have by Phase 2.
Phase 1	
Phase 2	
Phase 3	



Commercial Activity:
Establish patient registry/Risk-evaluation strategy (post launch)

Activity Description:

Develop a registry for patients to collect long-term, real-world data on the safety, efficacy, and outcomes of CGTx or best supportive care or usual care.

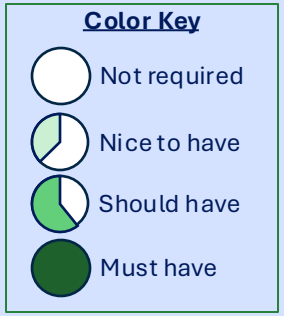
Risk from Incomplete Activity:

CGTx clinical trials often involve long follow-up periods, leading to uncertainties around treatment outcomes such as effectiveness over time, tolerability, adverse events, and potential complications. Many of these uncertainties could be addressed through extended patient monitoring. However, without a robust registry, collecting long-term real-world data becomes difficult, potentially affecting post-launch reimbursement decisions, market access, and overall profitability.

Benefits	Barriers	Overcoming
• Enables monitoring of patients treated (or not treated) with a cell or gene therapy over the long-term. Enables quantification and validation of long-term treatment effects including duration of effect an other unknowns at the time of launch. • Regulatory authorities, such as the FDA and EMA, often mandate the use of patient registries to monitor post-authorization safety and efficacy of CGTx drugs. Results may affect reimbursement decisions post-launch. • Can be used to continuously further the evidence base of the disease area by publishing observed outcomes.	• Aligning on the variables and outcomes to collect. • Costly to design, implement and maintain, which for CGTx therapies could be a decade or more for follow-up.	• Develop a study plan, protocol and project plan that outlines the scope, purpose/objectives, timeline, patient populations, interventions, outcomes. • Assign responsibilities, personnel (incl advisory board), facilities, resource commitment, and contractors to execute and monitor the registry over time. • Extract value from the registry from analysis of outcomes and publishing results.

Priority by phase

Pre-clinical	This activity is usually a requirement by regulatory authorities and initiated in Phase 3
Phase 1	
Phase 2	
Phase 3	



Potential consequences of not executing commercial activity that supports access and affordability matters

Commercial activity supporting access/affordability	Consequences of not executing/failing activity
Reimbursement and market access strategy	After a product gains market authorization by the FDA, EMA or other government agency the manufacturer subsequently needs to gain market access through securing reimbursement. While manufacturers have freedom in most cases to set their list prices, market access is granted via a positive reimbursement decision. Following a health technology appraisal where the cost-effectiveness is assessed, a reimbursement decision is made (also influenced by the price of the therapy). A poor market access and reimbursement strategy could lead to: • Limited Market Access - insurers may not cover the drug or put access hurdles in place to limit access to sub-populations. In turn, limited access may lead to: • Financial losses, sub-optimal revenues and adoption • Patients may not be able to access potentially life-saving or disease modifying therapies. If affordability is not considered in the strategy it may impact: • Patients may face a high financial strain leading to potential low-adherence, discontinuation and overall reduced market penetration. • This may also result in poor public relations/perception if many patients are unable to afford the treatment.
Market segmentation	Understanding market segments is critical to develop marketing strategies, product positioning and messaging that resonate with the key audience. Poor market segmentation may lead to: • Reduced effectiveness of marketing campaigns, limited adoption • Inefficient resource allocation, potentially marketing to segments that are not profitable, or where the unmet need is low. • Low profitability from mis-pricing based on segments where the unmet need is low.
Patient journey	Potential consequences of not having a well-developed patient journey could result in: • Missing key patient, provider or payer unmet needs and sub-optimal product development including support services. These are opportunities to alleviate key pressure points and enhance the delivery of care across the continuum. • Poor patient engagement, as the manufacturer may not communicate effectively or provide adequate support throughout the treatment process. • These shortcomings may result in lower patient access and lower sales.

Potential consequences of not executing commercial activity that supports access and affordability matters (continued)

Commercial activity supporting access/affordability	Consequences of not executing/failing activity
Quantitative pricing studies	While manufacturers have freedom in most cases to set their list prices, market access is granted via a positive reimbursement decision. Following a health technology appraisal where the cost-effectiveness is assessed, a reimbursement decision is made which is also influenced by the price of the therapy. A poor pricing strategy could lead to: • Limited Market Access - insurers and HTA bodies may not grant reimbursement of the drug or put access hurdles in place to limit access to sub-populations where the unmet need is higher if the price is perceived as too high. In turn, limited access may lead to: • Financial losses, sub-optimal revenues and adoption • Patients may not be able to access potentially life-saving or disease modifying therapies. If affordability is not considered in the pricing strategy it may impact: • Patients may face a high financial strain leading to potential low-adherence, discontinuation and overall reduced market penetration. • This may also result in poor public relations/perception if many patients are unable to afford the treatment of if the therapy is not perceived to be value for money.
Establish patient registry/Risk-evaluation strategy (post launch)	With CGTx clinical trials, due to the duration of follow-up there may be many uncertainties surrounding the outcomes of treatment (e.g. duration of effectiveness, tolerability and adverse events, development of complications etc.) which could be resolved by following patient for longer time periods. • Without a robust registry, it becomes challenging to track long-term patient outcomes and gather real-world evidence, which may impact post-launch reimbursement, market access, and profitability.

Commercial Activity:
Early revenue and market forecast

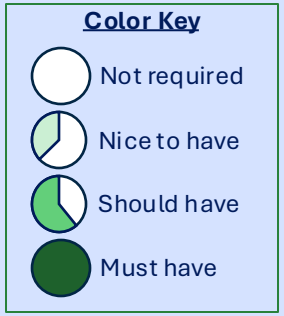
Activity Description:

Develop early market and revenue forecasts using published evidence and qualitative primary research to understand the target population, peak market share, pricing and resulting revenues.

Benefits	Barriers	Overcoming
• These analysis are refined through out the development process and useful for negotiating potential licensing agreements.	• Early forecasts will be rudimentary and largely based on crude hypothetical assumptions. • More robust forecasts require an evidence-based understanding of the therapeutic area, available treatments, and where the asset fits in the clinical paradigm. Additionally, insights are needed to understand potential market shares and pricing assumptions.	• Document key assumptions for early forecasts that are developed inhouse - these assumptions can be validated or refined during subsequent market research. • Refine forecasts during the clinical development cycle by conducting robust secondary and primary market research using the TPP, understand where the product fits into the clinical paradigm, and gain insights from IDIs how the product will be perceived, potential market share and price range. • Work with a market access/strategy consulting firm with expertise in developing forecasts.

Priority by phase

Pre-clinical	This activity is nice to have in Phase 1, and a must have in Phase 2. In Phase 3 this should be updated with a pre-launch and launch forecast.
Phase 1	
Phase 2	
Phase 3	



Commercial Activity:
Brand strategy and positioning

Activity Description:

Starting the process of brand development, including naming and positioning the drug in the marketplace. Understand how a product is differentiated in the market.

Benefits	Barriers	Overcoming
• Lay the foundation for future value message development and what drivers of value are important to physicians, patients, payers and other stakeholders. • Attract funding to support future development.	• Ealy product positioning will be largely hypothesis driven given the lack of available/robust evidence. • Not understanding the products place in the clinical paradigm, potential value to patients, payers and providers. • As the product nears the end of phase 3 clinical studies the branding will be dependent on completing the value message development activity.	• Ensure market research is executed highlighting where the product fits into the clinical paradigm, and research with payers and providers will give insight into how the product will be perceived. • Early in the development process establish a clear vision for the product outlining the unmet need and how the product will meet the need. • By Phase 2/3, develop a brand strategy that identifies the target patients/providers, define the brand by what messages are to be communicated and positioning. This activity will require the value message development to be completed.

Priority by phase

Pre-clinical

Phase 1

Phase 2

Phase 3

This activity is nice to have in Phase 1, and a must have in Phase 2.

Color Key

- Not required
- Nice to have
- Should have
- Must have

Commercial Activity:
Establish (clinical and payer) advisory board

Activity Description:

Identify key opinion leaders who could serve as advisers. Periodically seek feedback on clinical and economic evidence generation efforts.
Periodically develop content for advisors to review and provide feedback to support the development process.

Benefits	Barriers	Overcoming
• Clinical and payer KOLs offer expert advice as the development program progresses through the clinical stages of development through commercial launch.	• Identifying KOLs and logistics of identifying availability of multiple advisors with busy schedules. • KOLs will need independent contractor agreements (incl CDAs) and the sponsor will need to report on honoraria, travel, accommodation and other expenses for compliance reasons. • Shared materials typically require legal approval of content and attendee ratios. • Ensure the meeting meets objectives.	• Develop logistics to follow relevant company and local rules and laws when organizing an advisory board meeting. • Consider outsourcing the organization, logistics, agenda, content development and meeting out-put analysis/reporting to a contractor to assist unless in-house company support is available.

Priority by phase

Pre-clinical

Phase 1

Phase 2

Phase 3

This activity is should have in Phase 2, and a must have in Phase 3.

Color Key

- Not required
- Nice to have
- Should have
- Must have

Commercial Activity:
Market landscape assessment/market research

Activity Description:

Conducting detailed market research to assess the potential demand, competition, pricing strategies, and market gaps.

Benefits	Barriers	Overcoming
• Understanding the size of the market, potential customers, unmet needs, and potential barriers to entry.	• The cost of preclinical market research can be perceived as prohibitively expensive and very time consuming for small companies or start-ups and often there is only one person in the company with commercial responsibilities. Some perceive this activity as unnecessary in the pre-clinical stage.	• Perform in-house research reaching out to providers/payers/advocacy groups, and other key stakeholders. • Utilize free online industry reports to inform market assessment. • Consider minimal investment options for acquiring therapeutic area/industry market reports.

Priority by phase

Pre-clinical 

Phase 1 

Phase 2 

Phase 3 

This is a should have activity in the Pre-clinical stage and a must have by Phase 1 including maintenance/ updating through Phase 3.

Color Key

 Not required

 Nice to have

 Should have

 Must have

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Commercial Activity:
Value message

Activity Description:

Develop value messages that communicate key drivers of value, which is supported by evidence that help differentiate a therapeutic in the marketplace.

Benefits	Barriers	Overcoming
• Value messages help clearly communicate the benefits of a drug to various stakeholders, including regulators, payors, healthcare providers, and patients. This ensures that everyone understands the therapeutic and economic value of the drug.	• Not incorporating key stakeholder input early in the evidence generation process (i.e. Phase I), so that Phase 2 and pivotal trials contain the right data to support a strong value proposition. • At the frontend of the development process a TPP is developed to begin formulating the key benefits and areas of differentiation for a drug. It is essential to have developed the key data to support each value message in parallel with the clinical development process.	• Conduct early market research (i.e. pre-clinical or Phase 1) into the market landscape, unmet needs, and disease burden. • Developing the TPP and evidence generation plan, early economic modeling will all contribute to charting the path to developing the right data required to support justifying the value and pricing of a product. • Refine messaged as the product moves through the development stages. • Conducting Advisory board meetings are useful for testing what data and messages resonates most with key stakeholders in terms of communicating the value of a product.

Priority by phase

Pre-clinical	This is a should have in Phase 2 and a must have in Phase 3.
Phase 1	
Phase 2	
Phase 3	

Color Key

- Not required
- Nice to have
- Should have
- Must have

Commercial Activity:
Value communication dossiers

Activity Description:

Development of AMCP dossier for the US (pre-approval/final approved versions) and HTA submission dossiers for Ex-US markets.

Benefits	Barriers	Overcoming
• As part of the technology assessment US payers typically request an AMCP dossier for new interventions. • Other HTA bodies have a different dossier format to communicate similar content, although it is usually more detailed.	• Sensitivity to sharing pre-approval information (fleshed-out clinical study report, final label and launch pricing) • Not having a fleshed-out value story. • Sensitivities to sharing sensitive data from clinical studies or delays in internal socialization of study data.	• Ensure available evidence is collected (e.g. market research, SLR, ITC, model reports, clinical study report, pre-launch label, value messages). • At minimum, have a draft/pre-launch version developed that can be quickly updated once the price is official (frequently this happens at launch).

Priority by phase

Pre-clinical

Phase 1

Phase 2

Phase 3

This is a should have in Phase 2 and a must have in Phase 3.

Color Key

- Not required
- Nice to have
- Should have
- Must have

Commercial Activity:
Pre-approval information exchange (PIE)

Activity Description:

Develop a presentation to proactively share and educate Payers in the US about certain health care economic and scientific information about a new emerging products.

Benefits	Barriers	Overcoming
• Market readiness tool that is used to facilitate early market access conversations with payers before Food and Drug Administration (FDA) approval. • Helps prepare the market for anticipated place in therapy, pricing, clinical trial results, potential indication, and anticipated timeline for FDA approval.	• Requires internal process for regulatory review and approval of materials to be shared externally with payers and other HCEI audiences. • Sensitivity to share pricing information pre-launch.	• Ensure there is evidentiary support for the HCEI to comply FDA regulations. • Internal training/education on benefits and socialization of best practices on sharing pre-approval HECI as a way to overcome sensitivities to keeping information confidential until launch.

Priority by phase

Pre-clinical	This is not a required activity but is a should have in Phase 3.
Phase 1	
Phase 2	
Phase 3	

Color Key

- Not required
- Nice to have
- Should have
- Must have

CIRM Access & Affordability Planning Toolkit Guidance for Applicants and Reviewers

Purpose

This **guidance document** is intended to help applicants and reviewers understand and apply the Access & Affordability (A&A) Toolkit developed by CIRM. The toolkit is designed to integrate structured access planning into CIRM's funding programs, ensuring that innovative therapies supported by CIRM can ultimately reach and benefit all Californians, especially underserved communities.

1. Overview of the Toolkit

The toolkit includes three main components:

A. Checklist

A structured list of commercialization-related activities that influence access and affordability. Activities are organized across four functional areas:

- Market Access
- Commercialization
- Health Economics and Outcomes Research (HEOR)
- Medical Affairs
- Each activity is tagged by:
- Development stage relevance (Preclinical to Phase 3/BLA)
- Priority: Must Have / Should Have / Nice to Have
- Timing: Pre-application prerequisite or post-award milestone

B. Evaluation Rubric

Used by reviewers to assess applicant progress on 12 selected activities most critical to access and affordability. Each activity is scored using:

- A Priority Factor based on its relevance to the development stage
- A Raw Score reflecting applicant progress (from "Not started" to "Completed in last 12 months")
- A Composite Score is calculated and used in review discussions and award monitoring

C. Guidance Documents (this document and future technical annexes)

These materials explain expectations, best practices, and examples of how to approach access and affordability planning at various stages of development.

2. Expectations for Applicants

Applicants are expected to:

- Review the Checklist to identify relevant activities for their development stage
- Include evidence of progress (or plans) in their application narrative or attachments
- Address Pre-requisite activities prior to application submission
- Propose Milestone-based activities to be completed during the course of the award

Key areas of focus include:

- Understanding the market and patient population
- Planning for reimbursement and access strategy
- Generating and communicating value
- Engaging key stakeholders (e.g., payers, providers, patient groups)
- Planning for long-term data generation (e.g., patient registries)

Where applicable, applicants should provide documentation of prior work (e.g., advisory board meeting summaries, pricing research, early economic modeling).

3. Use by Reviewers and CIRM Staff

Reviewers and staff will use the Evaluation Rubric to assess how well the proposed project incorporates access planning. Review will consider:

- The relevance of each activity to the development stage
- The quality and completeness of applicant work to date
- Alignment with the goal of equitable patient access in California

Rubric scores are used to guide review discussions and inform both:

- Initial funding decisions
- Ongoing award monitoring and milestone enforcement

4. Twelve Evaluated Activities in Accessibility and Affordability

The twelve rubric activities are defined in Annex A and detailed in Annex D milestone planning table at the end of this document.

5. Best Practices and Tips

Early engagement and documentation are critical. See Annex B for phase-appropriate examples and guidance.

6. Support and Resources

CIRM will provide:

- Webinars and office hours for applicants
- Access to templates and examples
- Clarification on expectations through program staff

Final versions of the checklist and rubric will be available in the PDEV and CLIN2 application materials.

7. Future Updates

This guidance will evolve based on feedback from applicants, reviewers, and program staff. Iterations may incorporate:

- Additional use cases
- Adjusted scoring models
- Integrated support from CIRM infrastructure (e.g., Alpha Clinics, CCCEs)

Annex A: Definitions of Checklist Activities

- **Market landscape assessment / market research**
  Conducting qualitative and quantitative research to assess market size, competition, demand, and barriers to entry.
- **Reimbursement and market access strategy**
  Planning for regulatory and payer approval by identifying pricing, coverage, and access considerations early in development.
- **Early revenue and market forecast**
  Estimating potential revenues based on target population, pricing assumptions, and market share projections.
- **Brand strategy and positioning**
  Developing a compelling brand identity, including name, message, and value proposition, aligned to stakeholder needs.
- **Market segmentation**
  Dividing the market into targetable groups based on geography, behaviors, or clinical characteristics.
- **Establish (clinical and payer) advisory board**
  Engaging KOLs and stakeholders to inform development plans and validate access strategies.
- **Value message**
  Creating a concise, evidence-based statement communicating the product's therapeutic and economic benefit.
- **Quantitative pricing studies**
  Using data-driven techniques like conjoint analysis to estimate willingness to pay and acceptable price ranges.
- **Value communication dossiers**
  Preparing formal summaries of evidence (e.g., AMCP dossiers) for use with payers and HTA agencies.
- **Establish patient registry**
  Planning a post-marketing registry to monitor long-term safety, efficacy, and real-world outcomes.
- **Patient journey**
  Mapping the full pathway from symptom onset to treatment, identifying barriers and unmet needs.
- **Pre-approval information exchange (PIE)**
  Preparing compliant information packets to inform payers ahead of FDA approval.

Annex B: Phase-Appropriate Examples and Best Practices

Preclinical Stage

- Conduct high-level market research using public sources
- Engage stakeholders to validate the target product profile (TPP)
- Outline early payer-relevant endpoints and unmet needs

Phase 1 Stage

- Begin structured interviews with providers or payers
- Create early financial models using published data
- Initiate pricing corridor exploration and stakeholder feedback

Phase 2 Stage

- Develop draft value messages and economic models
- Establishboards with diverse expert input
- Refine reimbursement strategies using payer interviews

Phase 3 Stage

- Execute PIE meetings to align with commercial readiness
- Launch patient registry planning and value dossier preparation
- Conduct formal quantitative pricing studies

Annex C: Milestone Planning Recommendations

Applicants should propose milestone-based activities based on their development stage. The following principles should guide planning:

- **Preclinical stage** activities should be focused on analysis, strategy development, and stakeholder engagement
- **Clinical stage** milestones should demonstrate execution of specific A&A activities (e.g., value message testing, pricing study initiation)
- Milestones should be specific, measurable, and time-bound
- When possible, link A&A milestones to technical or regulatory inflection points

Examples of appropriate milestones:

- Complete market segmentation analysis by Q4 2025
- Conduct pricing research interviews with 10 payers by end of Phase 2a
- Finalize and submit AMCP dossier within 3 months post-Phase 3 top-line data

Annex D: Phase-Appropriate Activities, Strategies, and Milestone Planning Table

Activity	Benefits	Strategy	Activity incorporated into award milestone?	Demonstrate activity progress to date in application?
Market landscape assessment/market research: Conducting detailed market research to assess the potential demand, competition, pricing strategies, and market gaps.	Understanding the size of the market, potential customers, unmet needs, and potential barriers to entry.	Perform in-house research reaching out to providers/payers/advocacy groups, and other key stakeholders. Utilize free online industry reports to inform market assessment. Consider minimal investment options for acquiring therapeutic area/industry market reports.	Yes- Preclinical	Yes- Phase 1
Reimbursement and market access strategy: Planning for the product's reimbursement strategy by assessing the healthcare landscape, payer preferences, and pricing models.	Early understanding of the product's economic value to health systems and key stakeholders is important for successful adoption in the market. During clinical stages outline an evidence generation plan for a product to ensure the "right" data will be available for regulators and reimbursement authorities to justify value and pricing.	Ensure market research is executed highlighting where the product fits into the clinical paradigm. Conduct early pricing studies to understand the price corridor that might be acceptable from the perspective of payers and providers given the attributes of the TPP. Early engagement with payers to understand access hurdles (e.g., prior authorizations); understand impacts the new product might have on provider practice in order to facilitate adoption. Continue monitoring and refinement of strategy as the product goes through the development process.	Yes- Phase 1	Yes- Phase 2
Early revenue and market forecast: Develop early market and revenue forecasts using published evidence and qualitative primary research to	These analyses are refined throughout the development process and useful for negotiating potential licensing agreements.	Document key assumptions for early forecasts that are developed in house - these assumptions can be validated or refined during subsequent market research.	Yes- Phase 1	Yes- Phase 2

understand the target population, peak market share, pricing and resulting revenues.		Refine forecasts during the clinical development cycle by conducting robust secondary and primary market research using the TPP, understand where the product fits into the clinical paradigm, and gain insights from IDIs regarding how the product will be perceived, potential market share and price range. Work with a market access/strategy consulting firm with expertise in developing forecasts.		
Brand strategy and positioning: Starting the process of brand development, including naming and positioning the drug in the marketplace. Understand how a product is differentiated in the market.	Lay the foundation for future value message development and what drivers of value are important to physicians, patients, payers and other stakeholders. Attract funding to support future development.	Ensure market research is executed highlighting where the product fits into the clinical paradigm; research with payers and providers will give insight into how the product will be perceived. Early in the development process, establish a clear vision for the product outlining the unmet need and how the product will meet the need. Later in the development process, develop a brand strategy that identifies the target patients/providers, define the brand by what messages are to be communicated, and lastly develop a positioning statement. This activity will require the value message development to be completed.	Yes- Phase 2	Yes- Phase 3
Market segmentation: Segregate potential customers (e.g., patients/providers/payers) into groups based on different characteristics (e.g., geography, demographics, behaviors, etc.).	Key benefits include the ability to optimize marketing effort, enhance adoption and brand competitiveness.	Identify datasets that allow for identification of site of service and HCP prescribing behaviors.	Yes- Phase 2	Yes- Phase 3

Establish (clinical and payer) advisory board: Identify key opinion leaders who could serve as advisers. Periodically seek feedback on clinical and economic evidence generation efforts. Periodically develop content for advisors to review and provide feedback to support the development process.	Clinical and payer KOLs offer expert advice as the development program progresses through the clinical stages of development through commercial launch.	Develop logistics to follow relevant company and local rules and laws when organizing an advisory board meeting. Consider outsourcing the organization, logistics, agenda, content development and meeting out-put analysis/reporting to a contractor to assist unless in-house company support is available	Yes- Phase 2	Yes- Phase 3
Value message: Develop value messages that communicate key drivers of value, which is supported by evidence that help differentiate a therapeutic in the marketplace.	Value messages help clearly communicate the benefits of a drug to various stakeholders, including regulators, payors, healthcare providers, and patients. This ensures that everyone understands the therapeutic and economic value of the drug.	Conduct early market research (i.e. pre-clinical or Phase 1) into the market landscape, unmet needs, and disease burden. Developing the TPP and evidence generation plan, early economic modeling will all contribute to charting the path to developing the right data required to support justifying the value and pricing of a product. Refine messaged as the product moves through the development stages. Conducting Advisory board meetings are useful for testing what data and messages resonate most with key stakeholders in terms of communicating the value of a product.	Yes- Phase 2	Yes- Phase 3
Quantitative pricing studies: Conduct a robust conjoint analysis to understand the impact of product attributes have on price from the	Understand the market acceptable price given demonstrated product attributes. Ability to optimize price and market share to maximize revenues.	In rare/ultrarare disease areas leverage other research studies (e.g. CEA, BIM, advisory boards, qualitative pricing research) to inform pricing decisions. In other cases, wait for the development program to reach Phase 3 and initial pivotal data becomes available. At this	Yes- Phase 2	Yes- Phase 3

perspective of payers and other key stakeholders.		point the investment risk is minimized by the product reaching the end-stage of development. Work with a vendor with access to large numbers of HCPs and payers for recruitment, and with expertise of programming surveys for simple data collection. Build in safeguards such as screening questions as part of the survey design to minimize risk of unreliable data.		
Value communication dossiers: Development of AMCP dossier for the US (pre-approval/final approved versions) and HTA submission dossiers for Ex-US markets	As part of the technology assessment US payers typically request an AMCP dossier for new interventions. Other HTA bodies have a different dossier format to communicate similar content, although it is usually more detailed.	Ensure available evidence is collected (e.g. market research, SLR, ITC, model reports, clinical study report, pre-launch label, value messages). At minimum, have a draft/pre-launch version developed that can be quickly updated once the price is official (frequently this happens at launch).	Yes- Phase 2	Yes- Phase 3
Establish patient registry/Risk-evaluation strategy (post launch): Develop a registry for patients to collect long-term, real-world data on the safety, efficacy, and outcomes of CGTx or best supportive care or usual care.	Enables monitoring of patients treated (or not treated) with a cell or gene therapy over the long-term. Enables quantification and validation of long-term treatment effects including duration of effect and other unknowns at the time of launch. Regulatory authorities, such as the FDA and EMA, often mandate the use of patient registries to monitor post-authorization safety and efficacy of CGTx drugs. Results may affect reimbursement decisions post-launch.	Develop a study plan, protocol and project plan that outline the scope, purpose/objectives, timeline, patient populations, interventions, outcomes. Assign responsibilities, personnel (incl advisory board), facilities, resource commitment, and contractors to execute and monitor the registry over time. Extract value from the registry from analysis of outcomes and publishing results.	Yes- Phase 2	Yes- Phase 3

	Can be used to continuously further the evidence base of the disease area by publishing observed outcomes.			
Patient journey: Develop a detailed pathway documenting the patient experience and healthcare service delivery from the point of a patient symptom on-set through diagnosis, treatment and management.	Developing a patient journey helps identifying pain points (unmet needs) and areas for improvement that a new treatment might alleviate and potentially lead to a more seamless and positive patient/provider/payer experience.	Engage with experts with experience in integrating data from diverse sources to streamline the process.	Yes- Phase 3	No
Pre-approval information exchange (PIE): Develop a presentation to proactively share and educate Payers in the US about certain health care economic and scientific information about new emerging products.	Market readiness tool that is used to facilitate early market access conversations with payers before FDA approval. Helps prepare the market for anticipated place in therapy, pricing, clinical trial results, potential indication, and anticipated timeline for FDA approval.	Ensure there is evidentiary support for the HCEI to comply with FDA regulations. Internal training/education on benefits and socialization of best practices on sharing pre-approval HECI as a way to overcome sensitivities to keeping information confidential until launch.	Yes- Phase 3	No