Federal Long COVID ROI Model v30 vs OECD 2026

Methodology comparison and validity statement

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Dimension	OECD 2026	Federal LC ROI Model v30
Definition	WHO post COVID-19 condition. Onset within 3 months, persistence at least 2 months, no other explanation.	WHO definition retained for case identification, with reinfection scoped morbidity attribution. Captures patients excluded by the 3 month onset rule via downstream NCD pathway.
Reinfection	Not modeled. Per infection LC risk treated as a single draw at 5 to 15%. Future incidence fixed at flu like 5 to 10%.	Reinfection scoped formula. Compounding risk anchored in Statistics Canada cohort showing 15% after one, 27% after two, 38% after three infections.
Cumulative damage	Acknowledged in narrative. Cardiovascular, diabetes and NCD acceleration cited but excluded from the cost model.	Captured. NCD acceleration and organ system damage priced through downstream healthcare and disability cost lines.
Cost frame	Direct healthcare plus labor productivity. QALY losses largely set aside.	Dual frame. Federal Fiscal per OMB Circular A-94 plus Social Welfare per Harvard BCA, gross and net of private compliance costs.
Mortality	Excess mortality from CV and cerebrovascular sequelae not monetized.	Excess mortality and cerebrovascular sequelae reflected in benefit lines.
Standards	OECD microsimulation. Descriptive and comparative across 42 countries.	OMB Circular A-94 compliant. Built for federal benefit cost analysis and policy adoption.
Headline	USD 11B direct plus USD 68 to 135B indirect annually 2025 to 2035.	FF BCR 4.59 to 1. SW BCR 8.38 to 1 gross, 6.01 to 1 net. Federal investment USD 5.19B over three years. Effectiveness rate 35%.

Why v30 is methodologically valid

Built on 112 peer reviewed sources, compliant with OMB Circular A-94 for federal benefit cost analysis, and structurally validated by the OECD April 2026 multi country model. The OECD analysis confirms the architecture of dual frame valuation and the dominance of indirect costs over direct healthcare costs. v30 retains the WHO case definition for inclusion, then layers reinfection scoped morbidity and downstream NCD attribution on top, which is precisely the burden the OECD acknowledges in narrative and excludes from its math. The 35% Program Effectiveness Rate, surfaced benefit classification amounts, and explicit private compliance costs were added in v30 to address peer reviewer critiques and to make the model defensible at federal scale.

Where v30 is the better instrument

First, federal usability. OECD is descriptive across 42 countries. v30 is built to OMB Circular A-94, which is the standard required for federal regulatory and appropriations decisions. Second, reinfection. The compounding risk documented in the Statistics Canada cohort and the Barcelona cohort is structural to the disease and absent from the OECD model. v30 prices it. Third, downstream NCD burden. Cardiovascular, kidney, neurologic and metabolic sequelae documented by Al-Aly, Bowe, Xie and the RECOVER program are acknowledged by OECD and excluded from its cost lines. v30 carries them through. Fourth, dual frame. v30 reports Federal Fiscal and Social Welfare BCRs separately, gross and net, which gives policymakers both the budgetary and the welfare lens in one instrument. Fifth, time scope. OECD truncates to 2025 to 2035 with assumed recovery; v30 carries longer horizon NCD costs that emerge after the OECD model has retired the case.

Selected foundational literature behind v30

Full 112 source annotated bibliography available on request. Key citations linked below.

Al-Aly Z, Davis H, McCorkell L, et al. (2024). Long COVID science, research and policy. *Nature Medicine.* doi.org/10.1038/s41591-024-03173-6

Xie Y, Xu E, Bowe B, Al-Aly Z. (2022). Long term cardiovascular outcomes of COVID-19. *Nature Medicine.* doi.org/10.1038/s41591-022-01689-3

Bowe B, Xie Y, Al-Aly Z. (2023). Postacute sequelae of COVID-19 at 2 years. *Nature Medicine.* doi.org/10.1038/s41591-023-02521-2

Bartsch SM, et al. (2025). The economic burden of Long COVID in the United States. *Journal of Infectious Diseases.* doi.org/10.1093/infdis/jiaf013

Bansal M. (2025). Economic burden of Long COVID. *npj Primary Care Respiratory Medicine.* doi.org/10.1038/s41533-025-00457-3

Davis HE, Assaf GS, McCorkell L, et al. (2021). Characterizing Long COVID in an international cohort. *EClinicalMedicine.* doi.org/10.1016/j.eclinm.2021.101019

Subramanian A, Nirantharakumar K, et al. (2022). Symptoms and risk factors for Long COVID. *Nature Medicine.* doi.org/10.1038/s41591-022-01909-w

Adjaye-Gbewonyo D, et al. (2023). Long COVID in adults: United States. NCHS Data Brief 480. dx.doi.org/10.15620/cdc:132417

Kirwin E, et al. (2026). Health related quality of life in Long COVID using EQ-5D-5L. *Quality of Life Research.* doi.org/10.1007/s11136-025-03867-8

OMB Circular A-94. Guidelines and discount rates for benefit cost analysis of federal programs. whitehouse.gov/wp-content/uploads/2023/11/CircularA-94.pdf

OECD (2026). Addressing the Costs and Care for Long COVID. doi.org/10.1787/87a0c171-en

WHO (2022). Post COVID-19 condition definition. who.int/europe/news-room/fact-sheets/item/post-covid-19-condition