SUBSECRETARÍA DE SALUD PÚBLICA
DIVISIÓN DE PLANIFICACIÓN SANITARIA
DEPARTAMENTO EVALUACIÓN DE TECNOLOGÍAS SANITARIAS Y SALUD BASADA EN EVIDENCIA

INFORME DE BÚSQUEDA Y SÍNTESIS DE COSTO-EFECTIVIDAD

Guía de Práctica Clínica
Hepatitis C 2019

PREGUNTA: EN PERSONAS CON HEPATITIS C CRÓNICA CIRROTICOS ¿SE DEBE "TRATAR CON RIBAVIRINA+AAD" EN COMPARACIÓN A "TRATAR CON AAD (SIN RIBAVIRINA)"?

Uno de los factores a considerar para formular una recomendación en Guías de Práctica Clínica con la metodología "*Grading of Recommendations Assessment, Development and Evaluation*" es la relación entre la efectividad y los costos de las intervenciones a evaluar.

BÚSQUEDA DE EVALUACIONES ECONÓMICAS

Para determinar si la evidencia de costo-efectividad de las tecnologías sanitarias era necesaria se aplicaron los siguientes criterios en conjunto con el equipo de expertos:

- Mucha variabilidad en la práctica clínica.
- Incertidumbre relevante respecto a costo efectividad de intervenciones evaluadas.
- Cambio en práctica clínica acarrea altos beneficios en términos de salud.
- El cambio en la práctica clínica puede tener un impacto relevante en costos y el presupuesto del sistema de salud.

La búsqueda consideró estudios de costo-efectividad y revisiones sistemáticas de evaluaciones de costo-efectividad sobre tratar con ribavirina más AAD versus tratar con AAD(sin rivabirina), en personas con hepatitis C crónica cirróticos. Se identificaron términos MESH y términos de texto libre asociados a la población. La búsqueda consideró estudios publicados en inglés y español, en las siguientes bases de datos: MEDLINE, EMABASE, COCHRANE, GOOGLE, BRISA y en el National Institute for health and Care Excellence (NICE).

Ver detalle en Anexo 1 "*Términos de Búsqueda y Resultados de la búsqueda*".

SÍNTESIS DE EVIDENCIA SEGÚN PREGUNTA

Luego de realizadas las búsquedas en todas las bases de datos y remover todos los duplicados, se obtuvieron en total 35 estudios. De estos, 30 fueron eliminados por título y abstract, mientras que 4 fueron descartados por no dar respuesta exacta a la pregunta en cuestión. De esta manera, sólo 1 artículo fue finalmente seleccionado para extracción de datos

Ver detalle en Anexo 2 *"Extracción de datos"*

RESUMEN DE LA EVIDENCIA BUSCADA

Estudio	Limitaciones	Incremental			Incertidumbre	Valoración del estudio
		Costo Total	Efecto Total	Costo-efectividad		
Zhao Y. et al. (Singapur, 2016) Cost-effectiveness of strategy-based approach to treatment of genotype 1 chronic hepatitis C Estudio en pacientes cirróticos y no cirróticos sobre estrategias de tratamiendo con AAD.	- Resultados pueden no adaptarse en su totalidad al sistema chileno, dado las diferencias entre el sistema de salud local y de Singapur. - No precisa detalles de dosis en los tratamientos	Costo promedio en pacientes con cirrosis* **BOC/PR** $37.229 USD **SOF/LDV** $151.862 USD **SOF/RBV** $148.911 USD **SOF/SMV** $305.582 USD BOC: Boceprevir PR: Peginterferon más Ribavirina SOF: Sofosbuvir LDV: Ledipasvir RBV: Ribavirina SMV: Simeprevir	Efecto promedio en pacientes con cirrosis **BOC/PR** 17.38 QALYs **SOF/LDV** 20.22 QALYs **SOF/RBV** 17.68 QALYs **SOF/SMV** 20.01 QALYs	Comparados con BOC/PR **SOF/LDV** $40.364 USD/QALY **SOF/RBV** $372.273 USD/QALY **SOF/SMV** $102.035 USD/QALY	Análisis de sensibilidad deterministico	**En el contexto del sistema de salud de Singapur, no resultaría costo efectivo el realizar tratamiento de AAD(SOF) mas Ribavirina comparándolo con el tratamiento standard(BOC/PR) en pacientes cirróticos. En cambio, existen combinaciones de AADs(como SOF/LDV) que si resultarían costo efectivos en pacientes cirróticos.**

* COSTO SEGÚN VALOR DÓLAR ESTADOUNIDENSE 2015

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ANEXO 1: ESTRATEGIA DE BÚSQUEDA Y RESULTADOS DE LA BÚSQUEDA

	Términos libres	DECS	MeSH
P	Hepatitis c, parenterally-transmitted non-a, parenterally transmitted non a, non b hepatitis, pt-nanbh, hepaciviruses, hepatitis c, hepacivirus, acute, cirrhotic, cirrhosis	Hepatitis C, hepacivirus, cirrosis	Hepatitis, liver cirrhosis
I	Direct acting antivirals, direct-acting antivirals, DAA, ribavirin	Antivirales de acción directa, DAA, ribavirina	Ribavirin
C	Direct acting antivirals, direct-acting antivirals, DAA	Antivirales de acción directa, DAA	No utilizado
O	Cost Benefit Analysis, Cost Effectiveness, Cost Utility Analysis, Economic Evaluation, Marginal Analysis, Pricing, Biomedical Technology Assessment, Health Technology Assessment, Economics, Willingness to pay, Health care cost, ICER, QALY, DALY, Quality Adjusted Life Years, Disability Adjusted Life Years, Incremental Cost Effectiveness Ratio	Análisis Costo Beneficio, Análisis Costo Efectividad, Análisis Costo Utilidad, Evaluación económica, Análisis de Precio, Tecnologías Biomédicas, Evaluación de tecnologías, Disponibilidad de pago, Costos en salud, Costos Sanitarios, ICER, QALY, DALY, Quality Adjusted Life Years, Disability Adjusted Life Years, Incremental Cost Effectiveness Ratio, AVAC, Año de vida ajustado por calidad, Razón costo efectividad, Año de vida ajustado por	Cost-benefit analysis, costs and cost analysis, technology assessment, biomedical

Base de datos	Fecha de búsqueda	Resultados	Resultados después de remover duplicados
Medline-Pubmed	19.08.2019	8	8
EMBASE	19.08.2019	40	27
NICE	19.08.2019	0	0
BRISA (RedETSA)	19.08.2019	0	0
COCHRANE	19.08.2019	0	0
GOOGLE	19.08.2019	0	0
Total	19.08.2019	48	35

Estrategias de Búsqueda

PUBMED

1	((((((((hepatitis c[MeSH Terms]) or hepacivirus[MeSH Terms]) or Parenterally-Transmitted Non-A, Non-B Hepatitis[Text Word]) or Parenterally Transmitted Non A, Non B Hepatitis[Text Word]) or PT-NANBH[Text Word]) or Hepatitis, Viral, Non-A, Non-B, Parenterally-Transmitted[Text Word]) or Hepaciviruses[Text Word]) or hepatitis c[Text Word]) or hepacivirus[Text Word]	**89657**
2	(direct acting antivirals[Text Word] or direct-acting antivirals[Text Word] or DAA[Text Word] or DAA's[Text Word] or AAD[Text Word] or AAD's[Text Word])	**1321**
3	((((Liver Cirrhosis[MeSH Terms]) or cirrhotic[Text Word]) or cirrhosis[Text Word]) or Cirrhoses[Text Word])	**128342**
4	ribavirin[MeSH Terms] or ribavirin[Text Word]	**16488**
5	chronic[Text Word] or chronical[Text Word]	**1286535**
	(((cost-benefit analysis[MeSH Terms]) or (costs and cost analysis[MeSH Terms])) or technology assessment, biomedical[MeSH Terms]) or Analyses, Cost-Benefit[Text Word]) or Analysis, Cost-Benefit[Text Word]) or Cost-Benefit Analyses[Text Word]) or Cost Benefit Analysis[Text Word]) or Analyses, Cost Benefit[Text Word]) or Analysis, Cost Benefit[Text Word]) or Cost Benefit Analyses[Text Word]) or Cost Effectiveness[Text Word]) or Effectiveness, Cost[Text Word]) or Cost-Benefit Data[Text Word]) or Cost Benefit Data[Text Word]) or Data, Cost-Benefit[Text Word]) or Cost-Utility Analysis[Text Word]) or Analyses, Cost-Utility[Text Word]) or Analysis, Cost-Utility[Text Word]) or Cost Utility Analysis[Text Word]) or Cost-Utility Analyses[Text Word]) or Economic Evaluation[Text Word]) or Economic Evaluations[Text Word]) or Evaluation, Economic[Text Word]) or Evaluations, Economic[Text Word]) or Cost Benefit[Text Word]) or (Costs[Text Word] and Benefits[Text Word])) or (Benefits[Text Word] and Costs[Text Word])) or Cost-Effectiveness Analysis[Text Word]) or Analysis, Cost-Effectiveness[Text Word]) or Cost Effectiveness Analysis[Text Word]) or Cost-Minimization Analysis[Text Word]) or Analyses, Cost-Minimization[Text Word]) or Analysis, Cost-Minimization[Text Word]) or Cost Minimization Analysis[Text Word]) or Cost-Minimization Analyses[Text Word]) or Biomedical Technology Assessment[Text Word]) or Technology Assessment, Health[Text Word]) or Assessment, Health Technology[Text Word]) or Assessments, Health Technology[Text Word]) or Health Technology Assessment[Text Word]) or Health Technology Assessments[Text Word]) or Technology Assessments, Health[Text Word]) or Assessment, Biomedical Technology[Text Word]) or Assessments, Biomedical Technology[Text Word]) or Biomedical Technology Assessments[Text Word]) or Technology Assessments, Biomedical[Text Word]) or Technology Assessment[Text Word]) or Assessment, Technology[Text Word]) or Assessments, Technology[Text Word]) or Technology Assessments[Text Word]) or willingness to pay[Text Word]) or willingness-to-pay[Text Word]) or ICER[Text Word]) or QALY[Text Word]) or DALY[Text Word]) or Quality-Adjusted-Life-Years[Text Word]) or Quality Adjusted Life Years[Text Word]) or Disability-Adjusted-Life-Years[Text Word]) or Disability Adjusted Life-Years[Text Word]) or Incremental Cost Effectiveness Ratio[Text Word]	**297207**
6	(pubmed books[filter] or Case Reports[ptyp] or Clinical Study[ptyp] or systematic[sb] or Government Document[ptyp] or Clinical Trial, Phase III[ptyp] or Clinical Trial, Phase II[ptyp] or Clinical Trial, Phase I[ptyp] or Clinical Trial Protocol[ptyp] or Clinical Trial[ptyp] or Clinical Trial, Phase IV[ptyp] or Comparative Study[ptyp] or Controlled Clinical Trial[ptyp] or English Abstract[ptyp] or Evaluation Studies[ptyp] or Guideline[ptyp] or Journal Article[ptyp] or Lecture[ptyp] or Meta-Analysis[ptyp] or Multicenter Study[ptyp] or Observational Study[ptyp] or Overall[ptyp] or Practice Guideline[ptyp] or Review[ptyp] or Randomized Controlled Trial[ptyp] or Pragmatic Clinical Trial[ptyp])	**28489465**
7	("1999/01/01"[PDAT] : "2019/08/27"[PDAT])	**17045958**
8	(English[lang] or German[lang] or Portuguese[lang] or Spanish[lang])	**26612888**
9	#1 and #2 and #3 and #4 and #5 and #6 and #7 and #8	**34**

Estudios encontrados en Pubmed, usando filtro inicial, pero que no abordaban finalmente la pregunta de investigación:

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EMBASE

1	(Economic evaluation or biomedical technology assessment or health economics or quality adjusted life year or disability-adjusted life year).sh. or (Economic evaluation* or health economics or cost minimization analysis or cost minimization or cost-minimization or cost benefit analysis or cost-benefit or cost benefit or cost effectiveness analysis or cost-effectiveness or cost effectiveness or cost minimization analysis or cost utility analysis or cost utility or cost-utility or biomedical technology assessment or health technology assessment or biomedical technology assessment or high-cost technology or health economics or dental economics or economics, dental or economics, hospital or hospital economics or economics, medical or medical economics or medical, nursing or nursing economics or economic aspect or health care concept or device economics or pharmacoeconomics or marginal analysis or quality adjusted life year or qaly or quality-adjusted-life-year or disease burden or quality of life or disability adjusted life year or DALY or DALYs or disability-adjusted life year or disability-adjusted-life-year or ICER or Willingness to pay or Willingness-to-pay or Incremental cost effectiveness ratio or Incremental-cost-effectiveness-ratio).tw.	**564320**
2	(direct acting antiviral* or direct-acting antiviral* or DAA* or AAD*).tw.	**22995**
3	(Hepatitis c or hepacivirus).sh or (Hepatitis c or Hepacivirus or Hepaciviruses or parenterally transmitted non a non b hepatitis or Parenterally Transmitted Non A, Non B Hepatitis or PT-NANBH or Hepatitis, Viral, Non-A, Non-B, Parenterally-Transmitted).tw.	**137700**
4	Ribavirin.sh. or Ribavirin.tw.	**40209**
5	liver cirrhosis.sh. or cirrhotic.tw. or cirrhosis.tw.	**170593**
6	Chronic.tw. or chronical.tw.	**1528339**
7	1 and 2 and 3 and 4 and 5 and 6	**79**
8	limit 7 to (english or german or portuguese or spanish)	**79**
9	limit 8 to (article or article in press or books or chapter or "review")	**40**
10	limit 9 to last 20 years	**40**
11	limit 10 to embase	**40**

Estudios encontrados en Embase, usando filtro inicial, pero que no abordaban finalmente la pregunta de investigación:

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ANEXO 2: EXTRACCIÓN DE DATOS

Autor País (Año)	Moneda año	Población	Intervención /Comparador	Perspectiva	Modelo/ Horizonte temporal	Costo del tratamiento	RCEI	Análisis de sensibilidad	Financiamiento	Umbral de pago del país	Resulta costo-efectivo para el País
Zhao Y. et al. Singapur (2016)[1]	Dólar estado unidense, 2015	Personas de 50 años con hepatitis C,.	Comparador BOC/PR Intervención SOF/LDV SOF/RBV SOF/SMV BOC: Boceprevir PR: Peginterferon más Ribavirina SOF: Sofosbuvir LDV: Ledipasvir RBV: Ribavirina SMV: Simeprevir	Sistema de salud	Modelo de Markov Horizonte temporal de por vida	Costo promedio **BOC/PR** $37.229 USD 17.38 **SOF/LDV** $151.862 USD 20.22 **SOF/RBV** $148.911 USD 17.68 **SOF/SMV** $305.582 USD 20.01	Comparados con BOC/PR **SOF/LDV** $40.364 USD/QALY **SOF/RBV** $372.273 USD/QALY **SOF/SMV** $102.035 USD/QALY	Análisis de sensibilidad deterministico	Estudio fue financiado por un fondo educacional, que recibe dineros de distintas farmacéuticas. Sin embargo, se declara no haber recibido instrucción o financiamiento directo de ninguna farmacéutica.	Si bien no hay un valor exacto, se usa para este estudio el PIB per cápita de $52.000 USD en 2015	**En el contexto del sistema de salud de Singapur, no resultaría costo efectivo el realizar tratamiento de AAD(SOF) mas Ribavirina comparándolo con el tratamiento standard(BOC/PR) en pacientes cirróticos. En cambio, existen combinaciones de AADs(como SOF/LDV) que si resultarían costo efectivos en pacientes cirróticos.**

1: Zhao YJ, Khoo AL, Lin L, Teng M, Koh CJ, Lim SG, Lim BP, Dan YY. Cost-effectiveness of strategy-based approach to treatment of genotype 1 chronic hepatitis C. J Gastroenterol Hepatol. 2016 Sep;31(9):1628-37. doi:10.1111/jgh.13341. PubMed PMID: 26990023.