

## Supplementary Information – Online Resource 1

Evaluating cost-utility of continuous glucose monitoring in individuals with type 1 diabetes: a systematic review of methods and quality of studies using decision models and/or empirical data.

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**Table 1. Search results per database.**

Database	Results dd 19-1-2023 (number of items retrieved)	Results after de-duplication
PubMed	800	794
Embase	928	375
Web of Science	687	263
EconLit	12	10
Cochrane Trials	394	294
<b>TOTAL</b>	<b>2,821</b>	<b>1,736 (62% of total)</b>

**Table 2. Search query per database.**

Database	Search queries
<p><b>PubMed</b></p>	<p>("Diabetes Mellitus, Type 1"[Mesh] OR "Diabetic Ketoacidosis"[Mesh] OR t1dm[tiab] OR t1d[tiab] OR iddm[tiab] OR (("Diabetes Mellitus"[Mesh:NoExp] OR diabet*[tiab]) AND (type1[tiab] OR type1[tiab] OR "type 1"[tiab] OR "type I"[tiab] OR "type one" OR juvenile[tiab] OR "sudden onset"[tiab] OR autoimmun*[tiab] OR "auto immun*" [tiab] OR brittle[tiab] OR acidos*[tiab] OR pediatr*[tiab] OR paediatr*[tiab])) OR ("Diabetes Mellitus"[Mesh:NoExp] OR diabet*[ti] OR "diabetes mellitus"[tiab] OR "glycemic control"[tiab] OR "glycaemic control"[tiab]) NOT ("type 2"[tiab] OR "type2"[tiab] OR DMT2[tiab]))</p> <p>AND</p> <p>("Blood Glucose Self-Monitoring"[Mesh] OR "Insulin Infusion Systems"[Mesh] OR ("Blood Glucose"[Mesh] OR glucose[tiab] OR "blood sugar"[tiab] OR bgm[tiab] OR cgm[tiab] OR fgm[tiab]) AND ("Monitoring, Physiologic"[Mesh:NoExp] OR monitor*[tiab])) OR "insulin infusion*" [tiab] OR "infusion system*" [tiab] OR "sensor augmented" [tiab] OR "sensor guided" [tiab] OR "intermittently scanned" [tiab] OR "insulin pump*" [tiab] OR "pump therap*" [tiab] OR (continuous*[tiab] AND (infusion*[tiab] OR insulin*[tiab] OR glucose[tiab])) OR "flash monitoring" [tiab] OR "closed loop" [tiab] OR "open loop" [tiab] OR "hybrid loop" [tiab:~3])</p> <p>AND</p> <p>("Costs and Cost Analysis"[Mesh] OR "Quality-Adjusted Life Years"[Mesh] OR "Models, Economic"[Mesh] OR "Markov Chains"[Mesh] OR "quality adjusted" [tiab] OR qaly*[tiab] OR "cost-effect*" [tiab] OR "cost saving*" [tiab] OR ((cost[tiab] OR costs[tiab] OR economic[tiab]) AND (utilit*[tiab] OR benefit*[tiab] OR "life year*" [tiab])) OR "economic analy*" [tiab] OR "economic evaluat*" [tiab] OR "economic impact*" [tiab] OR "health economic" [tiab] OR ICER[tiab] OR "incremental cost*" [tiab] OR "value for money" [tiab] OR markov[tiab] OR economic[ti] OR cost[ti] OR costs[ti])</p> <p>AND</p> <p>(2000:2023[pdat]) NOT (("Animals"[Mesh] NOT "Humans"[Mesh]) OR "Comment"[pt])</p> <p><i>800 titles 19-1-2023</i></p>
<p><b>Embase</b></p>	<p>('insulin dependent diabetes mellitus'/exp OR 'diabetic ketoacidosis'/exp OR (t1dm OR t1d OR iddm):ab,ti,kw OR (('diabetes mellitus'/mj OR diabet*:ab,ti,kw) AND (type1 OR type1 OR 'type 1' OR 'type I' OR 'type one' OR juvenile OR 'sudden onset' OR autoimmun* OR 'auto immun*' OR brittle OR acidos* OR pediatr* OR paediatr*):ab,ti,kw) OR (('diabetes mellitus'/mj OR diabet*:ti OR ('diabetes mellitus' OR 'glycemic control' OR 'glycaemic control'):ab,ti,kw) NOT (('type 2' OR 'type2' OR DMT2):ab,ti,kw)))</p> <p>AND</p> <p>('continuous glucose monitoring system'/exp OR 'blood glucose monitoring'/exp/mj OR 'sensor augmented pump therapy'/exp OR 'sensor augmented pump'/exp OR 'insulin infusion'/exp OR 'insulin pump therapy'/exp OR 'insulin pump'/exp OR (('glucose blood level'/exp OR (glucose OR 'blood sugar' OR bgm OR cgm OR fgm):ab,ti,kw) AND ('physiologic monitoring'/de OR monitor*:ab,ti,kw)) OR ('insulin infusion*' OR 'infusion system*' OR 'sensor augmented' OR 'sensor guided' OR 'insulin pump*' OR 'pump therap*' OR (continuous* AND (infusion* OR insulin* OR glucose)) OR 'flash monitoring' OR 'closed loop' OR 'open loop' OR (hybrid NEXT/3 loop)):ab,ti,kw)</p>

	<p>AND</p> <p>('economic evaluation'/exp OR 'quality adjusted life year'/exp OR 'economic model'/mj OR 'Markov chain'/exp OR ('quality adjusted' OR qaly* OR 'cost-effect*' OR 'cost saving*' OR ((cost OR costs OR economic) AND (utilit* OR benefit* OR 'life year*')) OR 'economic analy*' OR 'economic evaluat*' OR 'economic impact*' OR 'health economic' OR ICER OR 'incremental cost*' OR 'value for money' OR markov):ab,ti,kw OR (economic OR cost OR costs):ti)</p> <p>NOT</p> <p>(( 'animal'/exp NOT 'human'/exp) OR 'conference abstract'/it OR 'note'/it)</p> <p>AND</p> <p>[2000-2023]/py</p> <p><i>928 titles 19-1-2023</i></p>
<b>Web of Science</b>	<p>TS=(t1dm OR t1d OR iddm OR ((diabetes OR diabetic) AND (type1 OR typel OR "type 1" OR "type I" OR "type one" OR juvenile OR "sudden onset" OR autoimmun* OR "auto immun*" OR brittle OR acidosis* OR pediater* OR paediatr*)) OR (( "diabetes mellitus" OR "glycemic control" OR "glycaemic control")) NOT (( "type 2" OR "type2" OR DMT2)))</p> <p>AND</p> <p>TS=(((glucose OR "blood sugar" OR bgm OR cgm OR fgm) AND monitor*) OR "insulin infusion*" OR "infusion system*" OR "sensor augmented" OR "sensor guided" OR "insulin pump*" OR "pump therap*" OR (continuous* AND (infusion* OR insulin* OR glucose)) OR "flash monitoring" OR "closed loop" OR "open loop" OR (hybrid NEAR/3 loop))</p> <p>AND</p> <p>TS=((( "cost-effect*" OR "quality adjusted" OR qaly* OR "cost saving*" OR ((cost OR costs OR economic) AND (utilit* OR benefit* OR "life year*" OR evaluat* OR analys* OR impact)) OR "health economic" OR ICER OR "incremental cost*" OR "value for money" OR markov))</p> <p>NOT</p> <p>DT=(Meeting Abstract)</p> <p>AND</p> <p>PY=(2000 or 2001 or 2002 or 2003 or 2004 or 2005 or 2006 or 2007 or 2008 or 2009 or 2010 or 2011 or 2012 or 2013 or 2014 or 2015 or 2016 or 2017 or 2018 or 2019 or 2020 or 2021 or 2022 or 2023)</p> <p><i>687 titles 19-1-2023</i></p>
<b>EconLit (EBSCO)</b>	<p>TX (diabet* OR t1dm OR t1d OR iddm)</p> <p>AND</p> <p>TX (((glucose OR "blood sugar" OR bgm OR cgm OR fgm) AND monitor*) OR "insulin infusion*" OR "infusion system*" OR "sensor augmented" OR "sensor guided" OR "insulin pump*" OR "pump there*" OR (continuous* AND (infusion* OR insulin* OR glucose)) OR "flash monitoring" OR "closed loop" OR "open loop" OR (hybrid N3 loop))</p> <p>AND</p> <p>TX ("quality adjusted" OR qaly* OR cost OR costs OR economic OR ICER OR "value for money" OR markov)</p> <p><i>12 titles 19-1-2023</i></p>
<b>Cochrane Library (Trials)</b>	<p>(([mh "Diabetes Mellitus, Type 1"] OR [mh "Diabetic Ketoacidosis"]) OR t1dm:ti,ab OR t1d:ti,ab OR iddm:ti,ab OR (([mh "Diabetes Mellitus"] OR diabet*:ti,ab) AND (type1:ti,ab OR typel:ti,ab OR "type 1":ti,ab OR "type I":ti,ab OR "type one" OR</p>

juvenile:ti,ab OR "sudden onset":ti,ab OR autoimmun\*:ti,ab OR ("auto" NEXT immun\*):ti,ab OR brittle:ti,ab OR acidosis\*:ti,ab OR pediatr\*:ti,ab OR paediatr\*:ti,ab))  
OR  
((([mh ^"Diabetes Mellitus"] OR diabet\*:ti OR "diabetes mellitus":ti,ab OR "glycemic control":ti,ab OR "glycaemic control":ti,ab) NOT ("type 2":ti,ab OR type2:ti,ab OR DMT2:ti,ab)))  
AND  
([mh "Blood Glucose Self-Monitoring"] OR [mh "Insulin Infusion Systems"] OR (([mh "Blood Glucose"] OR glucose:ti,ab OR "blood sugar":ti,ab OR bgm:ti,ab OR cgm:ti,ab OR fgm:ti,ab) AND ([mh ^"Monitoring, Physiologic"] OR monitor\*:ti,ab)) OR ("insulin" NEXT infusion\*):ti,ab OR ("infusion" NEXT system\*):ti,ab OR "sensor augmented":ti,ab OR "sensor guided":ti,ab OR "intermittently scanned":ti,ab OR ("insulin" NEXT pump\*):ti,ab OR ("pump" NEXT therap\*):ti,ab OR (continuous\*:ti,ab AND (infusion\*:ti,ab OR insulin\*:ti,ab OR glucose:ti,ab)) OR "flash monitoring":ti,ab OR "closed loop":ti,ab OR "open loop":ti,ab OR "hybrid loop":ti,ab)  
AND  
([mh " Costs and Cost Analysis"] OR [mh "Quality-Adjusted Life Years"] OR [mh "Models, Economic"] OR [mh "Markov Chains"] OR "quality adjusted":ti,ab OR qaly\*:ti,ab OR cost-effect\*:ti,ab OR ("cost" NEXT saving\*):ti,ab OR ((cost:ti,ab OR costs:ti,ab OR economic:ti,ab) AND (utilit\*:ti,ab OR benefit\*:ti,ab OR ("life" NEXT year\*):ti,ab)) OR ("economic" NEXT analy\*):ti,ab OR ("economic" NEXT evaluat\*):ti,ab OR ("economic" NEXT impact\*):ti,ab OR "health economic":ti,ab OR ICER:ti,ab OR ("incremental" NEXT cost\*):ti,ab OR "value for money":ti,ab OR markov:ti,ab OR economic:ti OR cost:ti OR costs:ti)  
Limits: Publication Year from 2000 to 2023, in Trials  
*394 titles 19-1-2023*