

Please answer the following two essay questions:

- 1) Using PubMed, start with the MeSH database to search for randomized controlled trials supporting the use of beta blockers in the treatment of congestive heart failure. To reveal your search strategy, find the "Details" section and copy and paste content your strategy below.

PICO	Description
P atient or Problem	CHF (Congestive Heart Failure)
I ntervention	Beta Blockers
C omparison	
O utcome	Trials supporting the use of for treatment

Clinical Question: Find randomized controlled trials supporting the use of beta blockers in the treatment of congestive heart failure

"Heart Failure"[Mesh] AND "Adrenergic beta-Antagonists/pharmacology"[Mesh] AND (Randomized Controlled Trial[ptyp] AND English[lang] AND jsubsetaim[text])

The above resulted in 59 results.

- Using the reference Clinical Evidence found on the Galter Library Website (in the databases tab after searching), please determine the NNT (number of patients needed to treat) with beta blockers in order to prevent 1 death in 1 year in people with any severity of heart failure.

Hint: After finding details on beta blockers, it turns out that $1/(\text{absolute risk reduction})$ is the NNT. That is, if you know the percent by which an event can be made less likely by a treatment, in this case death prevented by taking beta blockers, you can take the reciprocal of the absolute risk reduction to determine the number of people you need to treat with beta blockers in order to prevent one death over the stated time period. Presenting compelling information in this manner to physicians may increase compliance with recommendations over a simple link to a reference article or search summary.

In researching through the Clinical Evidence database, I found one reference that showed that the NNT along with details that might help a physician to increase confidence in the prospect of using beta blockers for patients with heart failure. I have provided direct links to the write up as well as extracted relevant portions from it.

Direct Links:

http://clinicalevidence.bmj.com.ezproxy.galter.northwestern.edu/cweb/conditions/cvd/0204/0204_16.jsp#summary

http://clinicalevidence.bmj.com.ezproxy.galter.northwestern.edu/cweb/conditions/cvd/0204/0204_T1.jsp

Summary - Mortality

Compared with placebo (in people with any severity of heart failure) Beta-blockers are more effective at reducing the risk of death in people with heart failure of any severity also receiving triple therapy, and in

What are the effects of drug treatments for heart failure?									
23 (12,263) [38] [40]	Mortality	Beta-blockers v placebo (in people with any severity of heart failure)	4	0	0	-1	0	Moderate	Directness point deducted for uncertainty of benefit in older people
23 (12,263) [38] [40]	Hospital admission	Beta-blockers v placebo (in people with any severity of heart failure)	4	0	0	-2	0	Low	Directness points deducted for uncertainty of benefit in older people and use of composite outcome
28 (7637) [39]	Functional improvement	Beta-blockers v placebo (in people with any severity of heart failure)	4	-1	0	0	0	Moderate	Quality point deducted for incomplete reporting of results
At least 6 (at least 12,278) [41] [42]	Mortality	Beta-blockers v placebo (in people with severe heart failure)	4	0	0	-1	0	Moderate	Directness point deducted for inclusion of various co-interventions
3 (8988) [42]	Hospital admission	Beta-blockers v placebo (in people with severe heart failure)	4	-1	0	-1	0	Low	Quality point deducted for incomplete reporting of results. Directness point deducted for composite outcome
1 (1010) [43]	Mortality	Beta-blockers v ACE inhibitors	4	0	0	-2	0	Low	Directness points deducted for composite outcome and low number of comparators