Dynamic Updating of Clinical Recommendations

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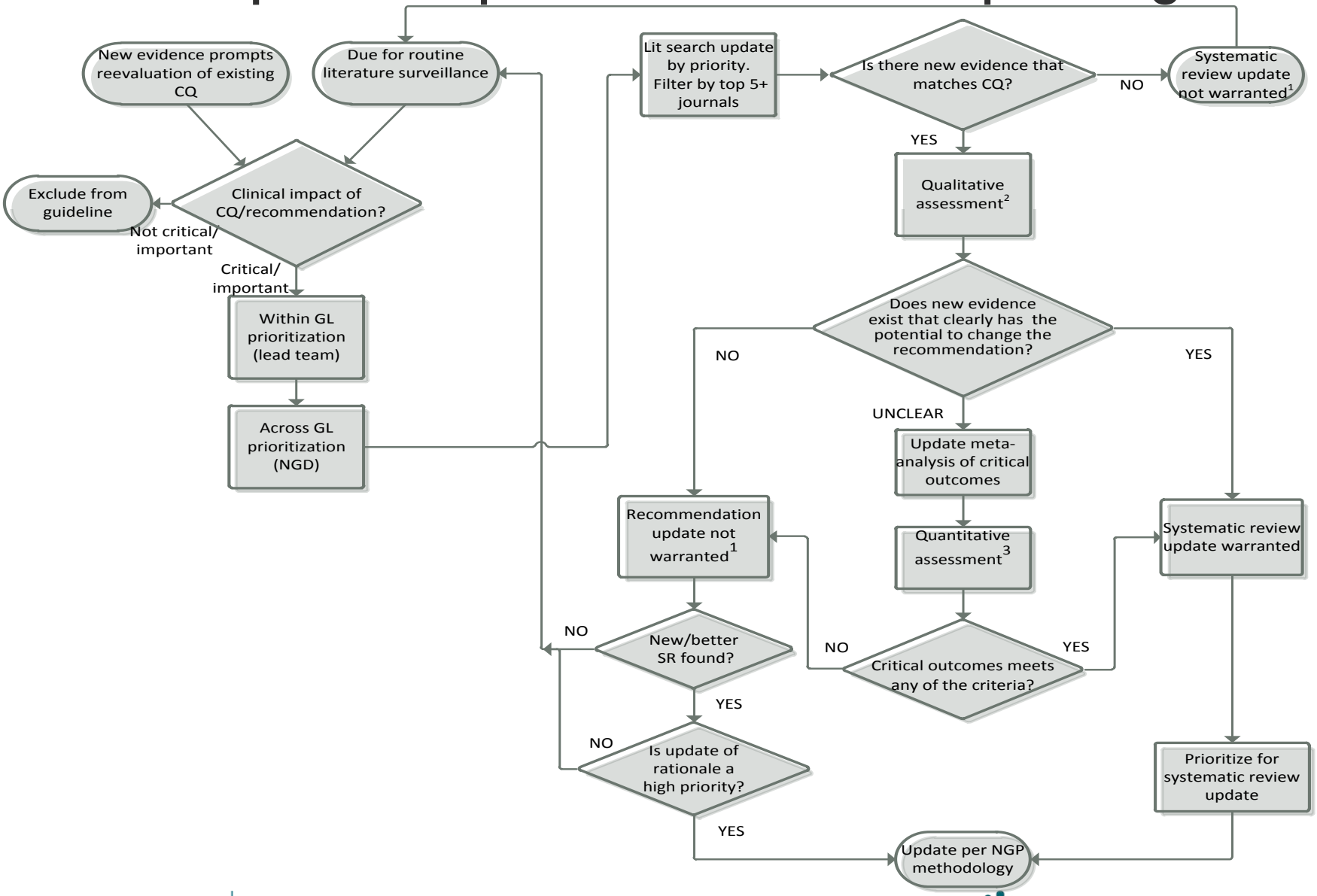
Overview

- Description of Dynamic updating
- Steps in updating process
  - With use of an IT platform
- Benefits

What is dynamic updating?

- Continuous updating process based on the most important clinical questions within KP's guideline portfolio
  - Allows KP's National Guideline Program to focus resources on updates that will have the most timely, clinical impact within the KP delivery system
  - Requires review of questions to determine those that are clinically important and those that can be retired or combined with other questions
    - Use of a priority ranking for clinical importance and importance for literature surveillance/monitoring
    - Involves clinical leads and methodologists
- Guidelines no longer updated on bi-annual cycle
  - The most important clinical questions are addressed first followed by the remainder

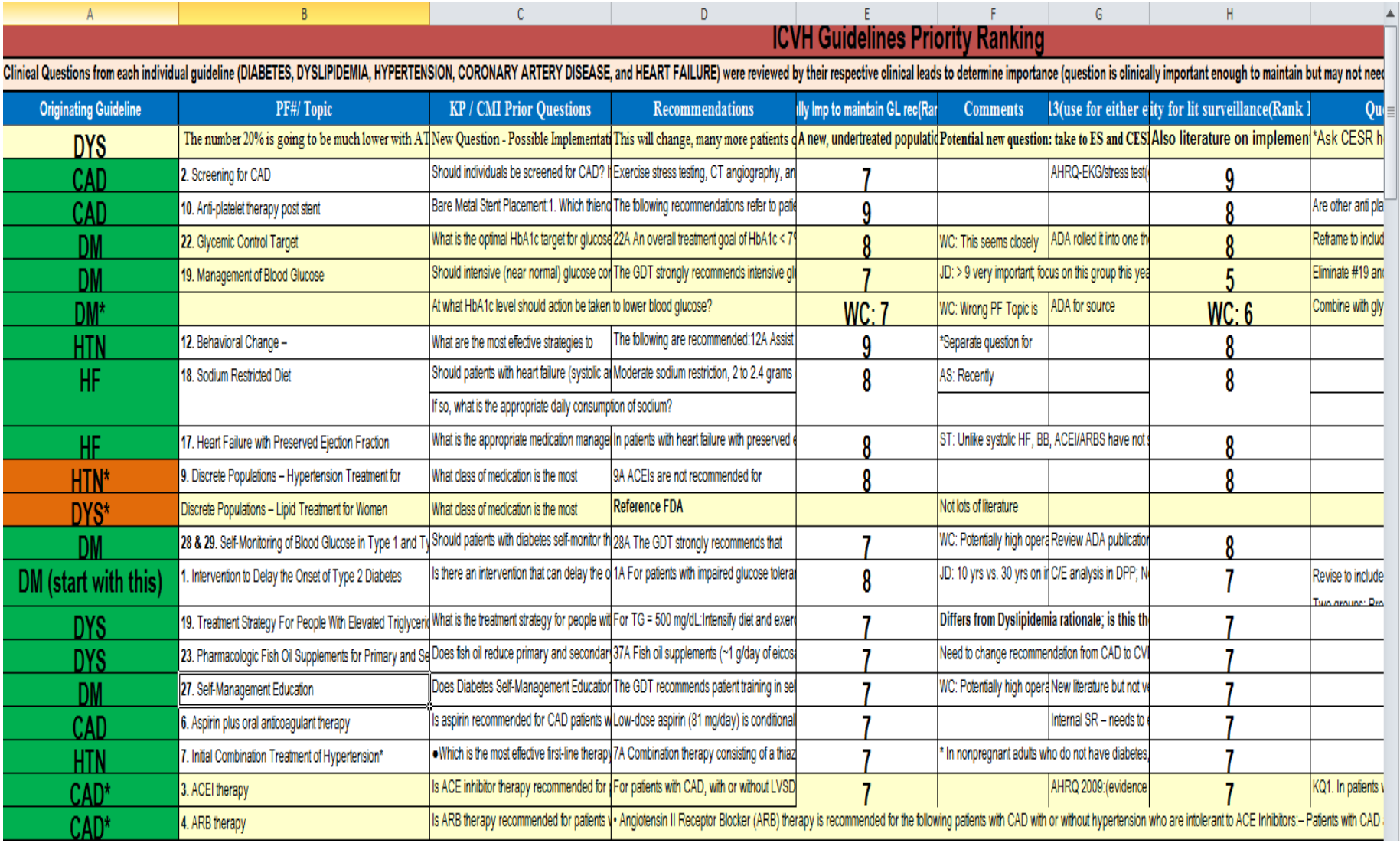
Clinical question prioritization and updating



Steps in updating process

1. Create priority grid for each guideline
    - Consists of all clinical questions for the specific guideline
2. Create and document search strategy
    - Includes running searches through a filter comprised of the top 5+ journals for that disease area
    - Separate searches constructed for RCTs, SRs, and Cochrane
        - RCTs/SRs searched in PubMed (Medline)
3. Assess filtered studies for inclusion/exclusion
    - Incorporates use of an IT platform
4. Determine if an update is warranted based on included studies
    - Qualitative assessment
    - Quantitative assessment
        - Mini-database (using IT platform)
5. Update rationale/recommendation
    - Using IT platform

1. Create priority grid for each guideline



A	B	C	D	E	F	G	H	
				ICVH Guidelines Priority Ranking				
Clinical Questions from each individual guideline (DIABETES, DYSLIPIDEMIA, HYPERTENSION, CORONARY ARTERY DISEASE, and HEART FAILURE) were reviewed by their respective clinical leads to determine importance (question is clinically important enough to maintain but may not nee								
Originating Guideline	PF#/ Topic	KP / CMI Prior Questions	Recommendations	lly Imp to maintain GL rec(Rar	Comments	3(use for either e	ity for lit surveillance(Rank 1	Qu
DYS	The number 20% is going to be much lower with AT	New Question - Possible Implementati	This will change, many more patients q	A new, undertreated populatio	Potential new question: take to ES and CES		Also literature on implemen	*Ask CESR h
CAD	2. Screening for CAD	Should individuals be screened for CAD? I	Exercise stress testing, CT angiography, an	7		AHRQ-EKG/stress test(	9	
CAD	10. Anti-platelet therapy post stent	Bare Metal Stent Placement:1. Which thienc	The following recommendations refer to patie	9			8	Are other anti pla
DM	22. Glycemic Control Target	What is the optimal HbA1c target for glucose	22A An overall treatment goal of HbA1c < 7%	8	WC: This seems closely	ADA rolled it into one th	8	Reframe to includ
DM	19. Management of Blood Glucose	Should intensive (near normal) glucose cor	The GDT strongly recommends intensive gl	7	JD: > 9 very important; focus on this group this yea		5	Eliminate #19 an
DM*		At what HbA1c level should action be taken to lower blood glucose?		WC: 7	WC: Wrong PF Topic is	ADA for source	WC: 6	Combine with gly
HTN	12. Behavioral Change –	What are the most effective strategies to	The following are recommended:12A Assist	9	*Separate question for		8	
HF	18. Sodium Restricted Diet	Should patients with heart failure (systolic a	Moderate sodium restriction, 2 to 2.4 grams	8	AS: Recently		8	
		If so, what is the appropriate daily consumption of sodium?						
HF	17. Heart Failure with Preserved Ejection Fraction	What is the appropriate medication manage	In patients with heart failure with preserved e	8	ST: Unlike systolic HF, BB, ACEI/ARBS have not s		8	
HTN*	9. Discrete Populations – Hypertension Treatment for	What class of medication is the most	9A ACEIs are not recommended for	8			8	
DYS*	Discrete Populations – Lipid Treatment for Women	What class of medication is the most	Reference FDA		Not lots of literature			
DM	28 & 29. Self-Monitoring of Blood Glucose in Type 1 and Ty	Should patients with diabetes self-monitor th	28A The GDT strongly recommends that	7	WC: Potentially high opera	Review ADA publicatio	8	
DM (start with this)	1. Intervention to Delay the Onset of Type 2 Diabetes	Is there an intervention that can delay the o	1A For patients with impaired glucose tolera	8	JD: 10 yrs vs. 30 yrs on i	C/E analysis in DPP; N	7	Revise to include
DYS	19. Treatment Strategy For People With Elevated Triglyceri	What is the treatment strategy for people wit	For TG = 500 mg/dL:Intensify diet and exer	7	Differs from Dyslipidemia rationale; is this th		7	
DYS	23. Pharmacologic Fish Oil Supplements for Primary and Se	Does fish oil reduce primary and secondar	37A Fish oil supplements (~1 g/day of eicos	7	Need to change recommendation from CAD to CV		7	
DM	27. Self-Management Education	Does Diabetes Self-Management Educatior	The GDT recommends patient training in sel	7	WC: Potentially high opera	New literature but not ve	7	
CAD	6. Aspirin plus oral anticoagulant therapy	Is aspirin recommended for CAD patients w	Low-dose aspirin (81 mg/day) is conditionall	7		Internal SR – needs to e	7	
HTN	7. Initial Combination Treatment of Hypertension*	•Which is the most effective first-line therapy	7A Combination therapy consisting of a thiaz	7	* In nonpregnant adults who do not have diabetes,		7	
CAD*	3. ACEI therapy	Is ACE inhibitor therapy recommended for p	For patients with CAD, with or without LVSD	7		AHRQ 2009:(evidence	7	KQ1. In patients v
CAD*	4. ARB therapy	Is ARB therapy recommended for patients v	• Angiotensin II Receptor Blocker (ARB) therapy is recommended for the following patients with CAD with or without hypertension who are intolerant to ACE Inhibitors:– Patients with CAD					

2a. Create and document search strategy
Example: CAD Screening Question

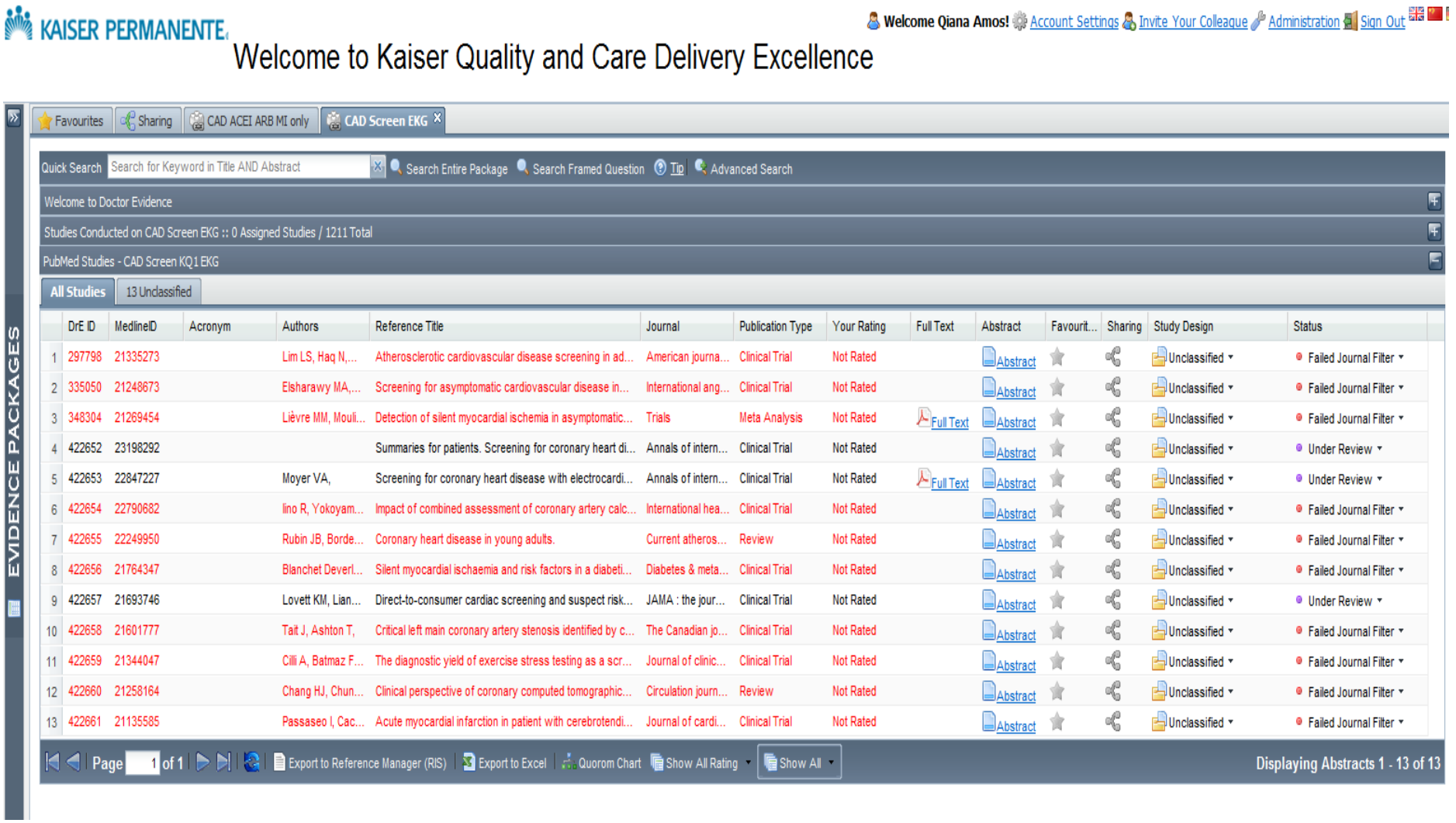
AHRQ Search Terms Using Ovid (Medline) for RCTs and controlled observational studies ***Key Question 1: Screening***	**KP Search Terms Using PubMed (Medline) for RCTs and controlled observational studies**	**Number of Hits**
Electrocardiography, ambulatory/ or electrocardiography/ or electrocardiography.mp.	Electrocardiography, ambulatory[mh: noexp] OR electrocardiography[mh: noexp] OR electrocardiography	7307
(ekg or ecg).mp.	("ekg" OR "ecg")	4026
3 or 4	**#3 OR #4**	**9432**
Exercise test/	exercise test[mh] OR ("exercise" AND "test") OR ("test" AND "exercise")	6684
(treadmill adj2 test).mp.	("treadmill test") OR ("treadmill" AND "test") OR ("test" AND "treadmill")	1124
(treadmill and ett).mp.	("ETT" OR "Exercise Tolerance Test*" OR "Cardiac Stress Testing") AND "treadmill"	20
or/6-8	**#6 OR #7 OR #8**	**6816**
5 or 9	**#5 OR #9**	**15864**
Myocardial ischemia/	(myocardial ischemia[mh]) OR (myocardial ischemia[tiab]) OR (acute coronary syndrome[tiab]) OR (angina [tiab] AND (stable[tiab] OR unstable[tiab] OR pectoris[tiab] OR microvascular[tiab])) OR (coronary disease [tiab]) OR (coronary artery disease [tiab]) OR (coronary[tiab] AND (occlusion[tiab] OR stenosis[tiab] OR restenosis[tiab] OR thrombosis[tiab])) OR (coronary-Subclavian Steal Syndrome [tiab]) OR (myocardial infarction [tiab]) OR (Anterior Wall Myocardial Infarction [tiab]) OR (inferior Wall Myocardial Infarction [tiab]) OR (myocardial stunning [tiab]) OR (cardiogenic shock[tiab])	30125
10 and 11	**#10 AND #11**	**2938**
Mass screening/	mass screening[mh: noexp] OR mass chest x-ray[mh:noexp] OR multiphasic screening[mh:noexp] OR mass screening[tiab] OR mass chest x-ray[tiab] OR multiphasic screening[tiab]	5737
12 and 13	**#12 AND #13**	**13**
Non-human Search String	Animals[mh] NOT Human [MH]	186814
limit 14 to humans	**#14 NOT #15**	**13**

2b. Run searches through a specified high-impact journal filter Example: CAD Screening Question

Specialty Journal Search (KQ 1)		
The New England Journal of Medicine (N Engl J Med)	#16 AND N Engl J Med[ta]	0
Lancet (Lancet)	#16 AND Lancet[ta]	0
The Journal of the American Medical Association (JAMA)	#16 AND JAMA[ta]	1
Annals of Internal Medicine (Ann Intern Med.)	#16 AND Ann Intern Med[ta]	2
British Medical Journal (BMJ.)	#16 AND BMJ[ta]	0
Circulation (Circulation.)	#16 AND Circulation[ta]	0
Journal of the American College of Cardiology (J Am Coll Cardiol.)	#16 AND J Am Coll Cardiol[ta]	0
European Heart Journal (Eur Heart J)	#16 AND Eur Heart J[ta]	0
The American Journal of Cardiology (Am J Cardiol.)	#16 AND Am J Cardiol[ta]	0
Total from Specialty Journals		3

**Journals in red box indicate top 5 journals were chosen using a methodology similar to AHRQ; Clinical Leads were polled for other high-impact journals relevant to each sub-domain.

3. Evaluate filtered studies using inclusion/exclusion criteria



4a. Qualitative Evaluation

- When matching, relevant systematic reviews and/or individual studies are found in the filtered literature search, ES staff qualitatively evaluates them for their potential to change the prior clinical recommendation(s).
  - New studies change the interpretation of “effectiveness”
  - New studies change the balance of benefits and harms
  - New studies introduce a potentially alternative intervention
  - New studies introduce a clinically important expansion of screening, testing or treatment
- If an update is warranted, ES staff puts the clinical question into the queue for an update of the systematic review and, as needed, the rationale and clinical recommendation(s).
  - This requires a complete review of all articles elicited from search strategy

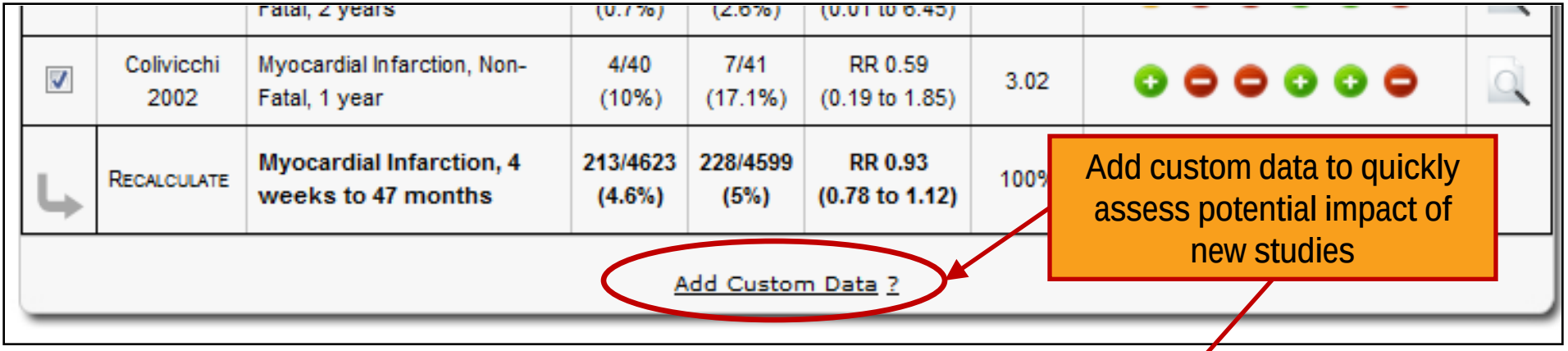
4b. Quantitative Evaluation

- When the qualitative assessment finds that the impact of the identified systematic reviews and/or studies is unclear, a quantitative assessment is performed.
- Consists of a cumulative meta-analysis, including the new data, to determine whether a change in the clinical recommendation(s) may be warranted.
  - The new confidence interval (CI) crosses 1.0 when the old one did not.
  - The updated CI does not cross 1.0, when the prior CI did.
  - The CI includes appreciable effect while the old CI did not; AND both the new and old CI included 1.0.
  - The new CI does NOT include appreciable effect while the old one did; AND both the new and old CI included 1.0.
- If an update is warranted, ES staff puts the clinical question into the queue for an update of the systematic review and, as needed, the rationale and clinical recommendation(s).
  - This requires a complete review of all articles elicited from search strategy

Additional Evaluation Information

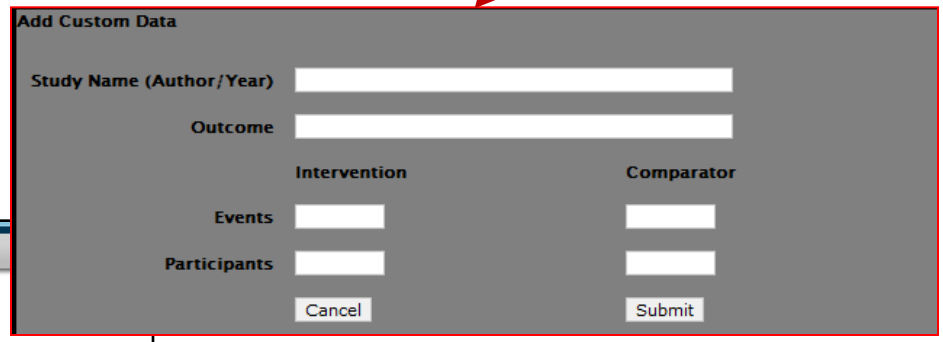
- When no systematic reviews or studies are found that match the clinical question (as documented in PICO format) or meet inclusion criteria, or if the qualitative/quantitative assessment demonstrates no change to the current recommendation(s), the GLT determines that an update of the systematic review is not warranted and the clinical question is returned to the queue for future literature surveillance.
- In cases where an identified new systematic review does not change a recommendation, but the GLT determines it is of higher quality, is quantitative, or is more current than the prior systematic review, ES staff puts the clinical question into the queue for an update of the rationale utilizing the replacement systematic review and following the NGP methodology.
  - Update dependent on resource availability

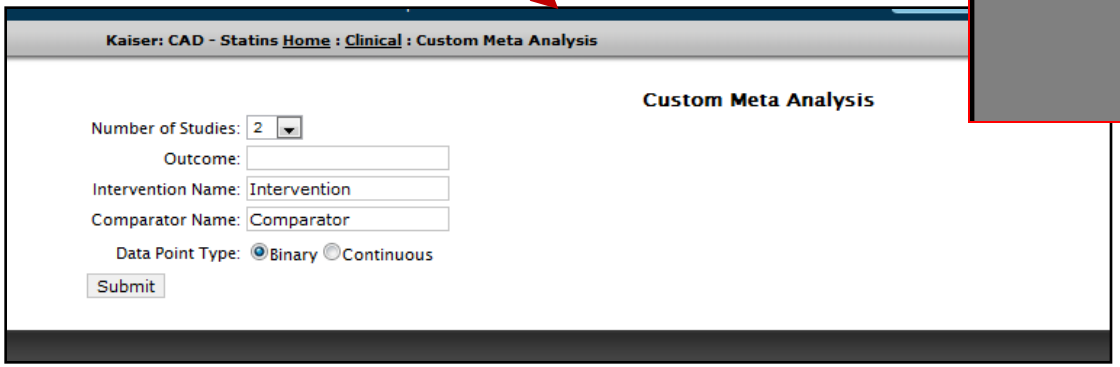
4b. Meta-Analysis: Adding Custom Data



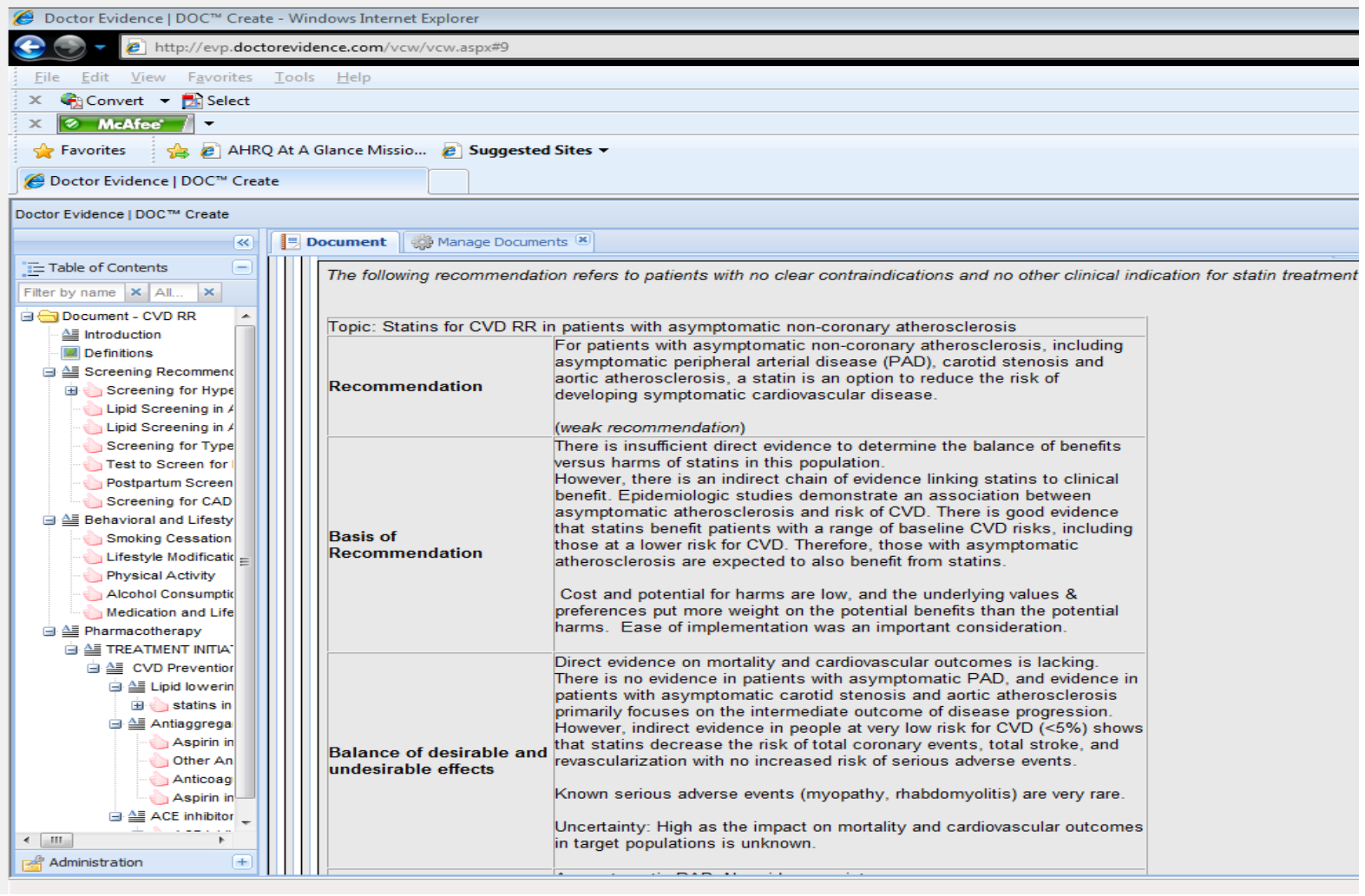
Add custom data to quickly assess potential impact of new studies

Create a custom meta-analysis with hypothetical data or recreate published meta-analyses





5. Update Rationale in VCW



**May only consist of a statement that no new evidence was found or that new evidence didn't change existing SR or recommendations.

Benefits

- The most important clinical questions are updated first
  - Use of prioritization scheme
- Abstract review more efficient
  - Limited to only those identified in the filter
  - Conducted in an IT platform where record of rejects/accepts done automatically
  - Generation of automatic Quorom diagram
- Can quickly assess if new evidence will impact current recommendations
  - Qualitative/quantitative review
  - Use of IT platform
- Revised recommendations stored in IT platform
  - Can be exported to KP's internal library or to other formats in close to "real-time" of update
    - Clinicians able to access most current information
- Saves time and resource use