# **Search Exploration**

The Search Exploration page allows you to generate search terms based on central concepts of your nest. Enter your Population, Interventions (and Comparators), and Outcomes (PICO) to generate a Boolean query that can be used on PubMed, and explore potential search results' abstracts, key terminology, and topics of interest to help construct your final search strategy. When complete, proceed to Lit Search and Run your Search.

## How to Begin Search Exploring

### 1. Navigate to Search Exploration

Nest Home		
Dashboard Settings		
Literature Search	1/1	
Other Sources Duplicate Review		

### 2. Enter PICO of Interest:

When you create a nest, you will have the option to add details about the Population, Interventions (and comparators), and Outcomes (PICO).

**Imagine you are asking the Research Question**: How do <u>atypical antipsychotics (I)</u> impact the <u>quality of life and disability (O)</u> in <u>adults with schizophrenia (P)</u>?

- First, enter the Population (patients with schizophrenia), Interventions (atypical antipsychotics), and Outcomes (disability and quality of life) in the Concept bar under Create.
- 2. Enter each concept, then hit the Enter button, this will move them under Concepts.
- 3. Continue adding terms until you have enough terms to identify your specific topic area (**Recommended**: 2 to 5 terms per category).

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What is a **Comparator?** A comparator is the drug, device, or intervention that the main intervention is tested against. Typical comparator arms include placebo and standard of care (SOC). In the framework shown here, comparators can be included under interventions.

### 3. Edit Concepts

When you have completed the tasks above, you will have unstructured concepts of interest, but no grouping of terms and no information yet populated to the Abstracts, RoboPICO, Topic Modeling, and Keywords.

To proceed, click on the down arrow under Concepts to view, add, and group together PICO elements. Alternatively, you can drag and drop a group into the concepts box to expand. 2024/05/20 18:32

#### Search Exploration

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Nest Home	Create <sup>(9)</sup>		Concepts	Preview Finalize
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ettings	Type then "enter"	O O At micel Antines schedies	2 Clozapine	
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igging	Patients	Risperidone	Quality Of Life	Click a concept to view its MeSH Definition
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	People	Quetiapine	Symptoms	
traction	Atypical	Clozapine	Social Functioning	
nfigure Extraction	Antipsychotics	Antipsychotics	Negative	
ingure Extraction	Outpatients	Aripiprazole	Schizophrenia	
udy Inspector	Schizophrenic	Haloperidol	Qol	
addy inspector	Symptoms	Ziprasidone	Bprs	
unthosis	Years	Atypical	Global State	
ynchesis	Mental Illness	Placebo	Weight Gain	
lanuscript Editor bstract Editor	Severe	Amisulpride	Adverse Effects	
xport	Age	Chlorpromazine	Extrapyramidal Symptoms	
	Chronic Schizophrenia	Paliperidone	Mental State	
	Diagnosed	Flupenthixol	Outcomes	
	Elderly	Antipsychotic	Panss	
	Negative	Bionanserin	Service	
	Participants Calification Discussion	Sertindole	Relapse	
	Schizoaffective Disorder	Antipsychotic Drugs	Subjective vveil-being	
	Schizophrenia-like Psychoses	Zotepine	Tolerability	
	Treatment	Antionarchetic Thorsey	Endacy	
	Acute Exacerbations	Lais	Coperal Euroctioning	
	Adoloscents	Antialucocorticoid	Baychonathology	
	Adults	Antinsychotic Medication	Psychotic Symptoms	
	Medicare	Antinsychotic Medications	Quality	
	0 50 100	0 20 40	0 20 40	
	Frequency	Frequency	Frequency	

#### 4. Group together PICO elements

- 1. Drag and drop the Group box into the concepts box.
- 2. Group together sets of populations, interventions, or outcomes. This group will function like the OR operator in search strings. In this example, specific types of antipsychotic medications are grouped together.
- 3. You can also negate whole groups by checking the box next to Negate.

Nest Home	Create ⑦	Concepts		Preview (Finalize >
Nest Home Dashbard Settings Literature Search 1/1 Other Sources Duplicate Review Search Exploration Screening 2/50 Configure Screening Tagging Configure Tagging Extraction Configure Extraction Study Inspector Synthesis Manuscript Editor Abstract Editor Export	Create ③ Concept: Croup: Croup: Croup	 Concepts Intervention Concepts Intervention	Delete	Preview         Finalize           1         (           2         Clozapine           3         OR           4         Aripiprazole           5         OR           6         Risperidone           7         OR           8         Atypical Antipsychotics           9         )           10         AND           11         (           12         Schizophrenia           13         )           14         AND           15         (           16         Positive and Negative Syndrome Scale           17         OR           20         Quality of Life           21         OR           22         Disability           23         OR           24         Quality of Life           25         OR           26         PANSS           27         OR           28         Positive and Negative Syndrome Scale
		~		2441 results [

### 5. Run or Update Search Exploration

To populate Abstracts, RoboPICO, Topic Modeling, and Keywords:

- 1. In the PICO Detail, select "Update Exploration Records" in the bottom right hand corner.
- 2. Review the query string to ensure that it is structured as intended.
- 3. Run the exploratory search. This may take a minute, since this will run a pre-search of PubMed.

Population	0	Intervention	0	Outcome	0	Add a Pl	CO element:
Schizophrenia X		typical Antipsychotics X Risperidone X Aripiprazole : Clozapine X	Delete	Quality of Life X Disability X Positive and Negative Syndrome Sc Positive and Negative Syndrome S	ale X Delete i X	Type P Note	Population
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When you update search exploration, the references in your nest **will not change.** The records and data returned from this step will only be used for Search Exploration.

### How to Interpret Search Exploration Findings

There are several ways to explore the references pulled by your exploratory search. The goal of this process should be to **expand or refine your search terms** so that they return as many records of interest while limiting irrelevant results.

Iterative Refinement: As you use the tools outlined below to add, remove, or restructure your terms, you should periodically re-run "Update Search Exploration", as this is **only run manually**, and not automatically updated.

#### 1. Abstracts

Skim through abstracts retrieved through your search exploration terms.

Search Exploration

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Nest Home Dashboard Settings Literature Search 1/1	Population Schizophrenia 🚿		Intervention          Atypical Antipsychotics       X         Nyperidone       Aripiprazole       X         National State       Atypical Antipsychotics       X         National State       Atypical Antipsychotic	о 	Outcome Quality of Life (x) Disability (x) Positive and Negative Syndrome 5 (x) Positive and Negative Syndrome 5 (x) Positive and Negative Syndrome 5 (x)	Add a PICO elemen Type Population Note	t: Negated Element		
Duplicate Review Search Exploration			Abstracts	Robo	PICO Topics Keywords		PICO Detail Query	Builder 🖪	
Query Builder						PubMed 💙	Navigation		
Screening 2/5 Configure Screening	Cost-effectiveness of first-	v. second	d-generation antipsycho	tic dru	gs: results from a randomised co	ntrolled trial in	Back	Next	
aging	schizophrenia responding p		previous therapy.				References		
onfigure Tagging	BACKGROUND There are claims the drugs are offset by improved heal	hat the extr th-related c	a costs of atypical (second-ge wality of life. AIMS To determ	neratior ine the i	) antipsychotic drugs over conventional ( elative costs and value of treatment with	(first-generation)	Title	Year	
xtraction onfigure Extraction	atypical antipsychotics in people v randomised controlled trial data o lower costs and higher quality-adj	arugis are orrset oy improved nearth-related quality or life. Ally's 10 determine the relative costs and value or treatment with conventional on atypical antipsychotics in people with schizophrenia. METHOD Cost-effectiveness acceptability analysis integrated clinical and economic randomised controlled trial data of conventional and atypical antipsychotics in or wither practice. RESULTS Conventional antipsychotics have lower costs and higher quality-adjusted life-years (QALYs) than atypical antipsychotics and were more than 50% likely to be cost-effective.							
tudy Inspector	CONCLUSIONS The primary and s gain in QALYs compared with atyp	ensitivity ar pical antipsy	nalyses indicated that <mark>conven</mark> /chotics.	tional ar	tipsychotics may be cost-saving and asso	ociated with a	A multicentre, randomized, naturalistic, open-label study between aripiprazole		
ynthesis Ianuscript Editor bstract Editor xoort	Population/Problem Inter	vention	Dutcome				and standard of care in the management of community-treated schizophrenic patients Schizophrenia Trial of Aripiprazole: (STAR) study.	2007	
							Neuroprotection: a therapeutic strategy to prevent deterioration associated with schizophrenia.	2007	
							Prediction of remission as a combination of symptomatic and functional remission and adequate subjective well-being in 2860 patients with schizephoenia	2006	

The purpose of reviewing Abstracts should be to:

- 1. Confirm that your search is returning relevant records, and
- 2. Identify the key terms found in relevant records and adding them to your PICO terms.

### 2. RoboPICO

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Browse commonly-mentioned Populations, Interventions, and Outcomes from abstracts and titles. PICO elements are identified by RoboPICO, which is an open source fork of the models offered in RobotReviewer.

Search Exploration: Atypical	Antipsychotics for Schizophrenia		-ģ-	1/1 ?
Nest Home Dashboard Settings Literature Search 1/1	Population Chizophrenia	Intervention         Image: Constraint of the second s	Outcome         Add a PICO element           lity of Life         Disability         Type           twe and Negative Syndrome S         Population           Note         Note	t
Other Sources Duplicate Review Search Exploration Query Builder		Abstracts RoboPICO	Topics Keywords	(PICO Detail) Query Builder
	Population	Intervention	Outcome	Definition
Screening 2/59	Patients	Risperidone	Quality Of Life	Click a concept to view its MeSH Definition
Configure Screening	Schizophrenia Schizophrenic	Olanzapine Clozapine	Symptoms Positive	
Tagging	Atypical Antipsychotics	Antipsychotics Ouetiapine	Adverse Effects Bors	
Configure Tagging	People Chronic Schizophrenia	Atypical Haloperidol	Panss Weight Gain	
Extraction	Treatment	Ziprasidone	Negative Schizophysica	
Configure Extraction	Symptoms	Aripiprazole	Depressive Symptoms	
Study Inspector	Bipolar Disorder	Flupenthixol	Patient Satisfaction	
Synthesis	Depression	Chlorpromazine	Social Functioning	
Manuscript Editor	Study	Plai	Mental State	
Abstract Editor	Suffering	Sertindole	Adverse Events	
Export	Acute Exacerbations	Alstonine	Efficacy	
	Adult	Antipsychotic	Evidence	
	India	Antipsychotic Risperidone	Incidence	
	Medication	Antipsychotic Therapy	Medication	
	Negative	Antipsychotic Treatment	Psychotic Symptoms	
	Outpatients	Benzodiazepine-like Drugs	Qol	
	Patient	Ca	Quality	
	Schizoaffective Disorder	Depot 60	Risk 20	
	U SU IUU	U 20 40	U 20 40	
	Frequency	Frequency	riequency	

The purpose of RoboPICO should be to:

- 1. Identify the most common topics of underlying abstracts, and
- 2. Identify terms that you should add to your PICO (which you can populate to "Add a PICO

Element" by clicking on the relevant row).

Clicking a row in the chart also initiates a strict MeSH lookup on the PICO element; not all extracted PICOs will correspond to MeSHs, but expect approximately half of lookups to succeed. In the event of a failed lookup, MeSH and Google search linkouts are offered.



What are MeSH? Medical Subject Headings (MeSH) are terms defined by the National Library of Medicine as a way to organize and search the content of medical literature. In some ways, MeSH are similar to Nested Knowledge tags, but unlike tags, MeSH are standardized.

### 3. Topics

Explore topics that appear most frequently among the references. References may belong to one or more topics, or none. Clicking a topic shows references belonging to the topic.

Search Exploration: Atypical A	ntipsychotics for Schizoph	renia				<u>َنْ</u> -	1/1	0
Nest Home Dashboard Settings Literature Search 1/1	Population Schizophrenia ×	Atypical Anti (Risperidone (Clozapine 8	itervention ipsychotics × P Aripiprazole 8	Quality of Life Positive and N Positive and N	Dutcome	Add a PICO eleme Type Outcome Note	ent: Negated Element Treated with Olanza	apine) <b>)</b> Add
Other Sources Duplicate Review Search Exploration Query Builder			Abstracts	RoboPICO Topics	Keywords		PICO Detail Query E	Builder 🖻
Screening 2/59							References By Topic Title	Year
Configure Screening	Outcome Measures	Versus Atypical	Amisulpride in Schizophrer (	iia Ilozapine and ZScale and	ClirSwitching to Argated wit	h Quet Domains	Novel antipsychotics, extrapyramidal side effects and tardive dyskinesia.	1998
Configure Tagging							The SOHO (Schizophrenia Outpatient Health Outcome) study: implications for the treatment of schizophrenia	2006
Extraction Configure Extraction		Aripiprazole for Schizophrenia	Conventional Agents				A multicentre, randomized, naturalistic, onen-label study between arininrazole	
Study Inspector	Atypical Neuroleptics	General Functioning	Months of Treatment	Schizophrenia in Remissi So	on hizophrenia or EHealth care C	cPrevention of Schiz	and standard of care in the management of community-treated schizophrenic patients Schizophrenia Trial of Aripiprazole: (STAR) study.	2007
Manuscript Editor Abstract Editor Export	Depression in Schizophrenia			Subjective Well-being Do	ses of Typical Antipsycho New Gen	eraSecond Generatio	Pharmacoeconomic studies of atypical antipsychotic drugs for the treatment of schizophrenia.	1999
<u> </u>		Treatment Costs Ps	Psychotic Disorders	Better Subjective			Aripiprazole for schizophrenia.	2006
				Dich	notomous Data We Calcula Metabolic	SyndrcPaliperidone	Atypical antipsychotic agents: a critical review.	2000
	Treated with Olanzapine	Weight Gain	Newer Antipsychotics	Evidence Suggests	Long-acting Injectable <sub>Fewer F</sub>	Relaps Mechanisms o	[Neuroleptic malignant syndrome and atypical antipsychotics: a brief review].	2008
							Antipsychotic medication, functional outcome and quality of life in schizophrenia: focus on amisulpride.	2010

These topics are derived from a Carrot2 clustering of abstract text to identify semantically similar concepts and group them.

#### 4. Keywords and N-Grams

Explore the frequency of word combinations (n-grams) from abstracts or indexed descriptors (MeSH and/or journal keywords). While n-grams are presented in order of occurence in abstract text, descriptors are inherently unordered. Clicking a row shows unique references containing the combination.

E Search Exploration	<b>n:</b> Atypical Antip	sychotics for Schizophrenia	3		-ˈÝ-	1/1 ?
Nest Home Dashboard Settings Literature Search	1/1	Population	Intervention           Atypical Antipsychotics         ×           Risperidone         Aripiprazole           Clozapine         >	Outcom     Quality of Life & Dis     Positive and Negative S     Outcom     Outcom	Add a PICO element ability × yndrome S × yndrome S × xotore	Element Treated with Olanzapine Card
Other Sources Duplicate Review Search Exploration Query Builder			Abstra	icts RoboPICO Topics Keyword	s	PICO Detail Query Builder
Screening Configure Screening	2/59 Col	umns (N): 2 v	Keywords/MeSHs	Abstract n-grams	Frequency	Click a row to view associated references.
Tagging Configure Tagging		1	Atypical	Antipsychotics	292	
Extraction	_	2 3	Quality Patients	Life Schizophrenia	265 113	
Configure Extraction Study Inspector	-	4	Atypical Rr	Antipsychotic Ci	93 82	
Synthesis		6	Negative	Symptoms	71	
Abstract Editor Export		8	Adverse	Effects	67	
		9	Quality Antipsychotic	Evidence Drugs	60 57	
		11 12	Treatment	Schizophrenia Quality	56	
		13 14	N Conventional	Rr Antipsychotics	47	

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Search Exploration: Atyp	ical Antipsychotics for Schizophrenia			-&-	1/1 0
Nest Home Dashboard Settings Literature Search 1/1 Other Sources	Population (Schizophrenia 🛞	Atypical Antipsychotics (Atypical Antipsychotics (Risperidone B) (Aripiprazole B) (Clozapine B)	Outcom     Quality of Life  > Di     Positive and Negative 1     Positive and Negative 1     Positive and Negative 1	Add a PICO elemen isability >> Syndrome S	t: Negated Element Treated with Olanzapine
Duplicate Review Search Exploration Query Builder		Abstrac	ts RoboPICO Topics Keyword	ds	PICO Detail Query Builder
		Keyw	ords		Associated References
Configure Screening	Columns (N): 2 V	Keywords/MeSHs	Abstract n-grams		Llick a row to view associated references.
	Rank	Keyword (1)	Keyword (2)	Frequency	
Tagging	1	Antipsychotic Agents	Humans	156	
Configure ragging	2	Humans	Schizophrenia	146	
Extraction	3	Antipsychotic Agents	Schizophrenia	144	
Configure Extraction	4	Humans	Quality Of Life	76	
Study Inspector	5	Antipsychotic Agents	Quality Of Life	75	
Synthesis	6	Quality Of Life	Schizophrenia	73	
Manuscript Editor	7	Adult	Humans	71	
Abstract Editor Export	8	Adult	Antipsychotic Agents	69	
	9	Female	Humans	65	
	10	Humans	Male	65	
	11	Antipsychotic Agents	Male	64	
	12	Adult	Schizophrenia	63	
	13	Antipsychotic Agents	Female	63	
	14	Female	Male	61	

### **Next Steps**

### When is Search Exploration finished?

You should continue iteratively refining your query until your Abstract, RoboPICO, Topics, and/or Keywords contain mostly relevant content and minimal extraneous records or concepts.

It is useful to **check the total number of records** returned from your query. To do so, view the number of records in the bottom right of the Preview screen, where you can also click to view the query on PubMed:



There is no 'right' number of records, but a good rule of thumb is to return:

- 1. A maximum of 200-300 records, with
- 2. An anticipated inclusion rate at or above 20%.

The reasoning behind this recommendation is that you want to capture relevant records while minimizing extra work during Screening (remember, your team will need to manually Screen all

results from your Search!). You can always add new/expanded Searches as you proceed, so achieving a high rate of inclusion should be prioritized over comprehensiveness.

### What comes after Search Exploration?

When you are finished with Search Exploration, proceed to review, test, and finalize your search string in Lit Search!

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