**Appendix- Search Strategies**

Librarian Searcher: Beth Blackwood, MSLS; Duke University Medical Center Library & Archives, Duke University School of Medicine

Peer review of search conducted by: Megan Von Isenburg, MSLS, AHIP; Duke University Medical Center Library & Archives, Duke University School of Medicine

**MEDLINE (via PubMed)  
Search date: 12/2/2022**

|  |  |  |
| --- | --- | --- |
| Concept | Strategy | Results |
| #1 VP Shunts | "Ventriculoperitoneal Shunt"[Mesh] OR "Ventriculoperitoneal Shunt\*"[tiab] OR "ventriculo-peritoneal shunt\*"[tiab] OR "VP Shunt"[tiab] OR "VP shunts"[tiab] OR VPS[tiab] OR ventricularperitoneal[tiab] OR "ventricular peritoneal"[tiab] OR "VP Shunt\*"[tiab] OR VPS[tiab] | 10,245 |
| #2 Developing Countries | "Developing Countries"[Mesh] OR "Afghanistan"[Mesh] OR "Bangladesh"[Mesh] OR "Benin"[Mesh] OR "Burkina Faso"[Mesh] OR "Burundi"[Mesh] OR "Cambodia"[Mesh] OR "Central African Republic"[Mesh] OR "Chad"[Mesh] OR "Comoros"[Mesh] OR "Democratic Republic of the Congo"[Mesh] OR "Eritrea"[Mesh] OR "Ethiopia"[Mesh] OR "Gambia"[Mesh] OR "Guinea"[Mesh] OR "Guinea-Bissau"[Mesh] OR "Haiti"[Mesh] OR "Kenya"[Mesh] OR "Democratic People's Republic of Korea"[Mesh] OR "Liberia"[Mesh] OR "Madagascar"[Mesh] OR "Malawi"[Mesh] OR "Mali"[Mesh] OR "Mozambique"[Mesh] OR "Myanmar"[Mesh] OR "Nepal"[Mesh] OR "Niger"[Mesh] OR "Rwanda"[Mesh] OR "Sierra Leone"[Mesh] OR "Somalia"[Mesh] OR "Tajikistan"[Mesh] OR "Tanzania"[Mesh] OR "Togo"[Mesh] OR "Uganda"[Mesh] OR "Zimbabwe"[Mesh] OR "Armenia"[Mesh] OR "Bhutan"[Mesh] OR "Bolivia"[Mesh] OR "Cameroon"[Mesh] OR "Cabo Verde"[Mesh] OR "Congo"[Mesh] OR "Cote d'Ivoire"[Mesh] OR "Djibouti"[Mesh] OR "Egypt"[Mesh] OR "El Salvador"[Mesh] OR "Georgia (Republic)"[Mesh] OR "Ghana"[Mesh] OR "Guatemala"[Mesh] OR "Guyana"[Mesh] OR "Honduras"[Mesh] OR "Indonesia"[Mesh] OR "India"[Mesh] OR "Kosovo"[Mesh] OR "Kyrgyzstan"[Mesh] OR "Laos"[Mesh] OR "Lesotho"[Mesh] OR "Mauritania"[Mesh] OR "Micronesia"[Mesh] OR "Moldova"[Mesh] OR "Mongolia"[Mesh] OR "Morocco"[Mesh] OR "Nicaragua"[Mesh] OR "Nigeria"[Mesh] OR "Pakistan"[Mesh] OR "Papua New Guinea"[Mesh] OR "Paraguay"[Mesh] OR "Philippines"[Mesh] OR "Independent State of Samoa"[Mesh] OR "Atlantic Islands"[Mesh] OR "Senegal"[Mesh] OR "Melanesia"[Mesh] OR "Sri Lanka"[Mesh] OR "Sudan"[Mesh] OR "Eswatini"[Mesh] OR "Syria"[Mesh] OR "Timor-Leste"[Mesh] OR "Ukraine"[Mesh] OR "Uzbekistan"[Mesh] OR "Vanuatu"[Mesh] OR "Vietnam"[Mesh] OR "Middle East"[Mesh] OR "Yemen"[Mesh] OR "Zambia"[Mesh] OR "Angola"[Mesh] OR "Albania"[Mesh] OR "Algeria"[Mesh] OR "American Samoa"[Mesh] OR "Argentina"[Mesh] OR "Azerbaijan"[Mesh] OR "Republic of Belarus"[Mesh] OR "Belize"[Mesh] OR "Bosnia and Herzegovina"[Mesh] OR "Botswana"[Mesh] OR "Brazil"[Mesh] OR "Bulgaria"[Mesh] OR "Chile"[Mesh] OR "China"[Mesh] OR "Colombia"[Mesh] OR "Costa Rica"[Mesh] OR "Croatia"[Mesh] OR "Cuba"[Mesh] OR "Czech Republic"[Mesh] OR "Dominica"[Mesh] OR "Dominican Republic"[Mesh] OR "Ecuador"[Mesh] OR "Estonia"[Mesh] OR "Equatorial Guinea"[Mesh] OR "Fiji"[Mesh] OR "Gabon"[Mesh] OR "Grenada"[Mesh] OR "Iran"[Mesh] OR "Iraq"[Mesh] OR "Jamaica"[Mesh] OR "Jordan"[Mesh] OR "Kazakhstan"[Mesh] OR "Latvia"[Mesh] OR "Lebanon"[Mesh] OR "Libya"[Mesh] OR "Lithuania"[Mesh] OR "Republic of North Macedonia"[Mesh] OR "Malaysia"[Mesh] OR "Indian Ocean Islands"[Mesh] OR "Mexico"[Mesh] OR "Montenegro"[Mesh] OR "Namibia"[Mesh] OR "Palau"[Mesh] OR "Panama"[Mesh] OR "Poland"[Mesh] OR "Peru"[Mesh] OR "Romania"[Mesh] OR "Russia"[Mesh] OR "Serbia"[Mesh] OR "Seychelles"[Mesh] OR "South Africa"[Mesh] OR "Saint Lucia"[Mesh] OR "Saint Vincent and the Grenadines"[Mesh] OR "Slovakia"[Mesh] OR "Suriname"[Mesh] OR "Thailand"[Mesh] OR "Tonga"[Mesh] OR "Tunisia"[Mesh] OR "Turkey"[Mesh] OR "Turkmenistan"[Mesh] OR "Venezuela"[Mesh] OR "Afghanistan"[all fields] OR "Bangladesh"[all fields] OR "Benin"[all fields] OR "Burkina Faso"[all fields] OR "Burundi"[all fields] OR "Cambodia"[all fields] OR "cabo verde"[all fields] OR "Central African Republic"[all fields] OR "Chad"[all fields] OR "Comoros"[all fields] OR "Democratic Republic of the Congo"[all fields] OR "Eritrea"[all fields] OR "Ethiopia"[all fields] OR "Gambia"[all fields] OR "Guinea"[all fields] OR "Guinea-Bissau"[all fields] OR "Haiti"[all fields] OR "Kenya"[all fields] OR "Democratic People's Republic of Korea"[all fields] OR "Liberia"[all fields] OR "Madagascar"[all fields] OR "Malawi"[all fields] OR "Mali"[all fields] OR "Mozambique"[all fields] OR "Myanmar"[all fields] OR "Nepal"[all fields] OR "Niger"[all fields] OR "Rwanda"[all fields] OR "Sierra Leone"[all fields] OR "Somalia"[all fields] OR "Tajikistan"[all fields] OR "Tanzania"[all fields] OR "Togo"[all fields] OR "Uganda"[all fields] OR "Zimbabwe"[all fields] OR "Armenia"[all fields] OR "Bhutan"[all fields] OR "Bolivia"[all fields] OR "Cameroon"[all fields] OR "Cabo Verde"[all fields] OR "Congo"[all fields] OR "Cote d'Ivoire"[all fields] OR "Djibouti"[all fields] OR "Egypt"[all fields] OR "El Salvador"[all fields] OR "Georgia"[all fields] OR "Ghana"[all fields] OR "Guatemala"[all fields] OR "Guyana"[all fields] OR "Honduras"[all fields] OR "Indonesia"[all fields] OR "India"[all fields] OR “Kiribati”[all fields] OR "Kosovo"[all fields] OR "Kyrgyzstan"[all fields] OR "Kyrgyz"[all fields] OR "Laos"[all fields] OR "lao"[all fields] OR "Lesotho"[all fields] OR "Mauritania"[all fields] OR "Micronesia"[all fields] OR "mariana"[all fields] OR "Moldova"[all fields] OR "Mongolia"[all fields] OR "Morocco"[all fields] OR "Nicaragua"[all fields] OR "Nigeria"[all fields] OR "Pakistan"[all fields] OR "Papua New Guinea"[all fields] OR "Paraguay"[all fields] OR "Philippines"[all fields] OR "Poland"[all fields] OR "Independent State of Samoa"[all fields] OR "Atlantic Islands"[all fields] OR "Sao Tome"[all fields] OR Principe[all fields] OR "Senegal"[all fields] OR "Melanesia"[all fields] OR "Solomon islands"[all fields] OR "Sri Lanka"[all fields] OR "Sudan"[all fields] OR "Swaziland"[all fields] OR "Eswatini"[all fields] OR "Syria"[all fields] OR "East Timor"[all fields] OR "Timor leste"[all fields] OR "Ukraine"[all fields] OR "Uzbekistan"[all fields] OR "Vanuatu"[all fields] OR "Vietnam"[all fields] OR "Middle East"[all fields] OR "west bank"[all fields] OR "Gaza"[all fields] OR "Yemen"[all fields] OR "Zambia"[all fields] OR "Angola"[all fields] OR "Albania"[all fields] OR "Algeria"[all fields] OR "Argentina"[all fields] OR "Samoa"[all fields] OR "Azerbaijan"[all fields] OR "Republic of Belarus"[all fields] OR "Belize"[all fields] OR "Bosnia-Herzegovina"[all fields] OR "Botswana"[all fields] OR "Brazil"[all fields] OR "Bulgaria"[all fields] OR "Chile"[all fields] OR "China"[all fields] OR "Colombia"[all fields] OR "Costa Rica"[all fields] OR "Croatia"[all fields] OR "Cuba"[all fields] OR "Czech"[all fields] OR "Czechoslovakia"[all fields] OR "Dominica"[all fields] OR "Dominican Republic"[all fields] OR "Ecuador"[all fields] OR "Estonia"[all fields] OR "Equatorial Guinea"[all fields] OR "Fiji"[all fields] OR "Gabon"[all fields] OR "Grenada"[all fields] OR "Iran"[all fields] OR "Iraq"[all fields] OR "Jamaica"[all fields] OR "Jordan"[all fields] OR "Kazakhstan"[all fields] OR "Latvia"[all fields] OR "Lebanon"[all fields] OR "Libya"[all fields] OR "Lithuania"[all fields] OR "Macedonia"[all fields] OR "Malaysia"[all fields] OR "Indian Ocean Islands"[all fields] OR "Maldives"[all fields] OR “Marshall Islands”[all fields] OR "Mauritius"[all fields] OR "Mexico"[all fields] OR "Montenegro"[all fields] OR "Namibia"[all fields] OR "Palau"[all fields] OR "Panama"[all fields] OR "Peru"[all fields] OR "Romania"[all fields] OR "Russia"[all fields] OR "Russian Federation"[all fields] OR "Serbia"[all fields] OR "Seychelles"[all fields] OR "Slovakia"[all fields] OR "Slovak"[all fields] OR "South Africa"[all fields] OR "Saint Lucia"[all fields] OR "Saint Vincent and the Grenadines"[all fields] OR "Suriname"[all fields] OR "Thailand"[all fields] OR "Tonga"[all fields] OR "Tunisia"[all fields] OR "Turkey"[all fields] OR "Turkmenistan"[all fields] OR "Tuvalu"[all fields] OR "Venezuela"[all fields] OR Palestine[all fields] OR Palestinian[all fields] OR "low resource"[all fields] OR "under-resourced"[all fields] OR "resource poor"[all fields] OR "under-developed"[all fields] OR "underdeveloped"[all fields] OR "developing country"[all fields] OR "developing countries"[all fields] OR "developing world"[all fields] OR "third world"[all fields] OR lmic[all fields] OR (low[all fields] AND middle[all fields] AND income[all fields]) | 7,061,814 |
| #3 Pediatrics | "Hospitals, Pediatric"[Mesh] OR "Child"[Mesh] OR "Infant"[Mesh] OR "Adolescent"[Mesh] OR "Pediatrics"[Mesh] OR "Minors"[Mesh] OR "Puberty"[Mesh] OR infant[tiab] OR infants[tiab] OR infancy[tiab] OR newborn[tiab] OR newborns[tiab] OR neonatal[tiab] OR neonate[tiab] OR neonates[tiab] OR baby[tiab] OR babies[tiab] OR preterm[tiab] OR prematurity[tiab] OR toddler[tiab] OR toddlers[tiab] OR boy[tiab] OR boys[tiab] OR boyhood[tiab] OR girl[tiab] OR girls[tiab] OR girlhood[tiab] OR kid[tiab] OR kids[tiab] OR child[tiab] OR childhood[tiab] OR children[tiab] OR adolescent[tiab] OR adolescents[tiab] OR adolescence[tiab] OR juvenile[tiab] OR juveniles[tiab] OR youth[tiab] OR youths[tiab] OR teen[tiab] OR teens[tiab] OR teenager[tiab] OR teenagers[tiab] OR teenaged[tiab] OR teenage[tiab] OR "young person"[tiab] OR "young persons"[tiab] OR "young people"[tiab] OR pediatric[tiab] OR pediatrics[tiab] OR paediatric[tiab] OR paediatrics[tiab] OR minors[tiab] | 4,729,640 |
| #4 Combined | #1 AND #2 AND #3 | 1,293 |
| # 5 Filter Editorials, etc. | #4 NOT (Editorial[pt] OR Letter[pt] OR Comment[pt] OR Congress[pt]) | 1,261 |
| #6 Humans only | #5 NOT (animals[MeSH Terms] NOT humans[MeSH Terms]) | 1,255 |
| #7 Validation String | **34243157 OR 26256071\* OR 22382102 OR 20887104 OR 27392895 OR 35134579 OR 23296321 OR 32916646** | 7/8 |

\*Not returned in search; indexed under "hydrocephalus: Kahle KT, Kulkarni AV, Limbrick DD, Warf BC. Hydrocephalus in children. The Lancet. 2016;387(10020):788-799. doi:10.1016/S0140-6736(15)60694-8

**Cochrane Library (via Wiley)  
-using Advanced Search > Search manager  
Search date: 12/2/2022**

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| --- | --- | --- |
| Concept | Strategy | Results |
| #1 VP Shunts | [mh "Ventriculoperitoneal Shunt"] OR ("Ventriculoperitoneal" NEXT Shunt\*):ti,ab OR ("ventriculo-peritoneal" NEXT shunt\*):ti,ab OR "VP Shunt":ti,ab OR "VP shunts":ti,ab OR VPS:ti,ab OR ventricularperitoneal:ti,ab OR "ventricular peritoneal":ti,ab OR ("VP" NEXT Shunt\*):ti,ab OR VPS:ti,ab | 403 |
| #2 Developing Countries-  Not applied in Cochrane Search | ~~[mh "Developing Countries"] OR [mh Afghanistan] OR [mh Bangladesh] OR [mh Benin] OR [mh "Burkina Faso"] OR [mh Burundi] OR [mh Cambodia] OR [mh "Central African Republic"] OR [mh Chad] OR [mh Comoros] OR [mh "Democratic Republic of the Congo"] OR [mh Eritrea] OR [mh Ethiopia] OR [mh Gambia] OR [mh Guinea] OR [mh Guinea-Bissau] OR [mh Haiti] OR [mh Kenya] OR [mh "Democratic People's Republic of Korea"] OR [mh Liberia] OR [mh Madagascar] OR [mh Malawi] OR [mh Mali] OR [mh Mozambique] OR [mh Myanmar] OR [mh Nepal] OR [mh Niger] OR [mh Rwanda] OR [mh "Sierra Leone"] OR [mh Somalia] OR [mh Tajikistan] OR [mh Tanzania] OR [mh Togo] OR [mh Uganda] OR [mh Zimbabwe] OR [mh Armenia] OR [mh Bhutan] OR [mh Bolivia] OR [mh Cameroon] OR [mh "Cabo Verde"] OR [mh Congo] OR [mh "Cote d'Ivoire"] OR [mh Djibouti] OR [mh Egypt] OR [mh "El Salvador"] OR [mh "Georgia (Republic)"] OR [mh Ghana] OR [mh Guatemala] OR [mh Guyana] OR [mh Honduras] OR [mh Indonesia] OR [mh India] OR [mh Kosovo] OR [mh Kyrgyzstan] OR [mh Laos] OR [mh Lesotho] OR [mh Mauritania] OR [mh Micronesia] OR [mh Moldova] OR [mh Mongolia] OR [mh Morocco] OR [mh Nicaragua] OR [mh Nigeria] OR [mh Pakistan] OR [mh "Papua New Guinea"] OR [mh Paraguay] OR [mh Philippines] OR [mh "Independent State of Samoa"] OR [mh "Atlantic Islands"] OR [mh Senegal] OR [mh Melanesia] OR [mh "Sri Lanka"] OR [mh Sudan] OR [mh Eswatini] OR [mh Syria] OR [mh Timor-Leste] OR [mh Ukraine] OR [mh Uzbekistan] OR [mh Vanuatu] OR [mh Vietnam] OR [mh "Middle East"] OR [mh Yemen] OR [mh Zambia] OR [mh Angola] OR [mh Albania] OR [mh Algeria] OR [mh "American Samoa"] OR [mh Argentina] OR [mh Azerbaijan] OR [mh "Republic of Belarus"] OR [mh Belize] OR [mh "Bosnia and Herzegovina"] OR [mh Botswana] OR [mh Brazil] OR [mh Bulgaria] OR [mh Chile] OR [mh China] OR [mh Colombia] OR [mh "Costa Rica"] OR [mh Croatia] OR [mh Cuba] OR [mh "Czech Republic"] OR [mh Dominica] OR [mh "Dominican Republic"] OR [mh Ecuador] OR [mh Estonia] OR [mh "Equatorial Guinea"] OR [mh Fiji] OR [mh Gabon] OR [mh Grenada] OR [mh Iran] OR [mh Iraq] OR [mh Jamaica] OR [mh Jordan] OR [mh Kazakhstan] OR [mh Latvia] OR [mh Lebanon] OR [mh Libya] OR [mh Lithuania] OR [mh "Republic of North Macedonia"] OR [mh Malaysia] OR [mh "Indian Ocean Islands"] OR [mh Mexico] OR [mh Montenegro] OR [mh Namibia] OR [mh Palau] OR [mh Panama] OR [mh Poland] OR [mh Peru] OR [mh Romania] OR [mh Russia] OR [mh Serbia] OR [mh Seychelles] OR [mh "South Africa"] OR [mh "Saint Lucia"] OR [mh "Saint Vincent and the Grenadines"] OR [mh Slovakia] OR [mh Suriname] OR [mh Thailand] OR [mh Tonga] OR [mh Tunisia] OR [mh Turkey] OR [mh Turkmenistan] OR [mh Venezuela] OR Afghanistan OR Bangladesh OR Benin OR "Burkina Faso" OR Burundi OR Cambodia OR "cabo verde" OR "Central African Republic" OR Chad OR Comoros OR "Democratic Republic of the Congo" OR Eritrea OR Ethiopia OR Gambia OR Guinea OR Guinea-Bissau OR Haiti OR Kenya OR "Democratic People's Republic of Korea" OR Liberia OR Madagascar OR Malawi OR Mali OR Mozambique OR Myanmar OR Nepal OR Niger OR Rwanda OR "Sierra Leone" OR Somalia OR Tajikistan OR Tanzania OR Togo OR Uganda OR Zimbabwe OR Armenia OR Bhutan OR Bolivia OR Cameroon OR "Cabo Verde" OR Congo OR "Cote d'Ivoire" OR Djibouti OR Egypt OR "El Salvador" OR Georgia OR Ghana OR Guatemala OR Guyana OR Honduras OR Indonesia OR India OR Kiribati OR Kosovo OR Kyrgyzstan OR Kyrgyz OR Laos OR lao OR Lesotho OR Mauritania OR Micronesia OR mariana OR Moldova OR Mongolia OR Morocco OR Nicaragua OR Nigeria OR Pakistan OR "Papua New Guinea" OR Paraguay OR Philippines OR Poland OR "Independent State of Samoa" OR "Atlantic Islands" OR "Sao Tome" OR Principe OR Senegal OR Melanesia OR "Solomon islands" OR "Sri Lanka" OR Sudan OR Swaziland OR Eswatini OR Syria OR "East Timor" OR "Timor leste" OR Ukraine OR Uzbekistan OR Vanuatu OR Vietnam OR "Middle East" OR "west bank" OR Gaza OR Yemen OR Zambia OR Angola OR Albania OR Algeria OR Argentina OR Samoa OR Azerbaijan OR "Republic of Belarus" OR Belize OR Bosnia-Herzegovina OR Botswana OR Brazil OR Bulgaria OR Chile OR China OR Colombia OR "Costa Rica" OR Croatia OR Cuba OR Czech OR Czechoslovakia OR Dominica OR "Dominican Republic" OR Ecuador OR Estonia OR "Equatorial Guinea" OR Fiji OR Gabon OR Grenada OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Latvia OR Lebanon OR Libya OR Lithuania OR Macedonia OR Malaysia OR "Indian Ocean Islands" OR Maldives OR "Marshall Islands" OR Mauritius OR Mexico OR Montenegro OR Namibia OR Palau OR Panama OR Peru OR Romania OR Russia OR "Russian Federation" OR Serbia OR Seychelles OR Slovakia OR Slovak OR "South Africa" OR "Saint Lucia" OR "Saint Vincent and the Grenadines" OR Suriname OR Thailand OR Tonga OR Tunisia OR Turkey OR Turkmenistan OR Tuvalu OR Venezuela OR Palestine OR Palestinian OR "low resource" OR under-resourced OR "resource poor" OR under-developed OR underdeveloped OR "developing country" OR "developing countries" OR "developing world" OR "third world" OR lmic OR (low AND middle AND income)~~ | 0 |
| #3 Pediatrics | [mh "Hospitals, Pediatric"] OR [mh Child] OR [mh Infant] OR [mh Adolescent] OR [mh Pediatrics] OR [mh Minors] OR [mh Puberty] OR infant:ti,ab OR infants:ti,ab OR infancy:ti,ab OR newborn:ti,ab OR newborns:ti,ab OR neonatal:ti,ab OR neonate:ti,ab OR neonates:ti,ab OR baby:ti,ab OR babies:ti,ab OR preterm:ti,ab OR prematurity:ti,ab OR toddler:ti,ab OR toddlers:ti,ab OR boy:ti,ab OR boys:ti,ab OR boyhood:ti,ab OR girl:ti,ab OR girls:ti,ab OR girlhood:ti,ab OR kid:ti,ab OR kids:ti,ab OR child:ti,ab OR childhood:ti,ab OR children:ti,ab OR adolescent:ti,ab OR adolescents:ti,ab OR adolescence:ti,ab OR juvenile:ti,ab OR juveniles:ti,ab OR youth:ti,ab OR youths:ti,ab OR teen:ti,ab OR teens:ti,ab OR teenager:ti,ab OR teenagers:ti,ab OR teenaged:ti,ab OR teenage:ti,ab OR "young person":ti,ab OR "young persons":ti,ab OR "young people":ti,ab OR pediatric:ti,ab OR pediatrics:ti,ab OR paediatric:ti,ab OR paediatrics:ti,ab OR minors:ti,ab | 314,357 |
| #4 Combined | #1 AND #3 | 127 |

**Embase (via Elsevier)  
Search date: 12/2/2021**

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| --- | --- | --- |
| Concept | Strategy | Results |
| #1 VP Shunts | 'brain ventricle peritoneum shunt'/exp OR ('brain ventricle peritoneum shunt' OR 'Ventriculoperitoneal Shunt\*' OR 'ventriculo-peritoneal shunt\*' OR 'VP Shunt' OR 'VP shunts' OR VPS OR ventricularperitoneal OR 'ventricular peritoneal' OR 'VP Shunt\*' OR VPS):ti,ab | 17,961 |
| #2 Developing Countries | 'Developing Countries'/exp OR 'Afghanistan'/exp OR 'Bangladesh'/exp OR 'Benin'/exp OR 'Burkina Faso'/exp OR 'Burundi'/exp OR 'Cambodia'/exp OR 'Central African Republic'/exp OR 'Chad'/exp OR 'Comoros'/exp OR 'Democratic Republic of the Congo'/exp OR 'Eritrea'/exp OR 'Ethiopia'/exp OR 'Gambia'/exp OR 'Guinea'/exp OR 'Guinea-Bissau'/exp OR 'Haiti'/exp OR 'Kenya'/exp OR 'Democratic Peoples Republic of Korea'/exp OR 'Liberia'/exp OR 'Madagascar'/exp OR 'Malawi'/exp OR 'Mali'/exp OR 'Mozambique'/exp OR 'Myanmar'/exp OR 'Nepal'/exp OR 'Niger'/exp OR 'Rwanda'/exp OR 'Sierra Leone'/exp OR 'Somalia'/exp OR 'Tajikistan'/exp OR 'Tanzania'/exp OR 'Togo'/exp OR 'Uganda'/exp OR 'Zimbabwe'/exp OR 'Armenia'/exp OR 'Bhutan'/exp OR 'Bolivia'/exp OR 'Cameroon'/exp OR 'Cabo Verde'/exp OR 'Congo'/exp OR 'Cote d Ivoire'/exp OR 'Djibouti'/exp OR 'Egypt'/exp OR 'El Salvador'/exp OR 'Georgia (Republic)'/exp OR 'Ghana'/exp OR 'Guatemala'/exp OR 'Guyana'/exp OR 'Honduras'/exp OR 'Indonesia'/exp OR 'India'/exp OR 'Kosovo'/exp OR 'Kyrgyzstan'/exp OR 'Laos'/exp OR 'Lesotho'/exp OR 'Mauritania'/exp OR 'Micronesia'/exp OR 'Moldova'/exp OR 'Mongolia'/exp OR 'Morocco'/exp OR 'Nicaragua'/exp OR 'Nigeria'/exp OR 'Pakistan'/exp OR 'Papua New Guinea'/exp OR 'Paraguay'/exp OR 'Philippines'/exp OR 'Independent State of Samoa'/exp OR 'Atlantic Islands'/exp OR 'Senegal'/exp OR 'Melanesia'/exp OR 'Sri Lanka'/exp OR 'Sudan'/exp OR 'Eswatini'/exp OR 'Syria'/exp OR 'Timor-Leste'/exp OR 'Ukraine'/exp OR 'Uzbekistan'/exp OR 'Vanuatu'/exp OR 'Vietnam'/exp OR 'Middle East'/exp OR 'Yemen'/exp OR 'Zambia'/exp OR 'Angola'/exp OR 'Albania'/exp OR 'Algeria'/exp OR 'American Samoa'/exp OR 'Argentina'/exp OR 'Azerbaijan'/exp OR 'Republic of Belarus'/exp OR 'Belize'/exp OR 'Bosnia and Herzegovina'/exp OR 'Botswana'/exp OR 'Brazil'/exp OR 'Bulgaria'/exp OR 'Chile'/exp OR 'China'/exp OR 'Colombia'/exp OR 'Costa Rica'/exp OR 'Croatia'/exp OR 'Cuba'/exp OR 'Czech Republic'/exp OR 'Dominica'/exp OR 'Dominican Republic'/exp OR 'Ecuador'/exp OR 'Estonia'/exp OR 'Equatorial Guinea'/exp OR 'Fiji'/exp OR 'Gabon'/exp OR 'Grenada'/exp OR 'Iran'/exp OR 'Iraq'/exp OR 'Jamaica'/exp OR 'Jordan'/exp OR 'Kazakhstan'/exp OR 'Latvia'/exp OR 'Lebanon'/exp OR 'Libya'/exp OR 'Lithuania'/exp OR 'Republic of North Macedonia'/exp OR 'Malaysia'/exp OR 'Indian Ocean Islands'/exp OR 'Mexico'/exp OR 'Montenegro'/exp OR 'Namibia'/exp OR 'Palau'/exp OR 'Panama'/exp OR 'Poland'/exp OR 'Peru'/exp OR 'Romania'/exp OR 'Russia'/exp OR 'Serbia'/exp OR 'Seychelles'/exp OR 'South Africa'/exp OR 'Saint Lucia'/exp OR 'Saint Vincent and the Grenadines'/exp OR 'Slovakia'/exp OR 'Suriname'/exp OR 'Thailand'/exp OR 'Tonga'/exp OR 'Tunisia'/exp OR 'Turkey'/exp OR 'Turkmenistan'/exp OR 'Venezuela'/exp OR ('Afghanistan' OR 'Bangladesh' OR 'Benin' OR 'Burkina Faso' OR 'Burundi' OR 'Cambodia' OR 'cabo verde' OR 'Central African Republic' OR 'Chad' OR 'Comoros' OR 'Democratic Republic of the Congo' OR 'Eritrea' OR 'Ethiopia' OR 'Gambia' OR 'Guinea' OR 'Guinea-Bissau' OR 'Haiti' OR 'Kenya' OR 'Democratic Peoples Republic of Korea' OR 'Liberia' OR 'Madagascar' OR 'Malawi' OR 'Mali' OR 'Mozambique' OR 'Myanmar' OR 'Nepal' OR 'Niger' OR 'Rwanda' OR 'Sierra Leone' OR 'Somalia' OR 'Tajikistan' OR 'Tanzania' OR 'Togo' OR 'Uganda' OR 'Zimbabwe' OR 'Armenia' OR 'Bhutan' OR 'Bolivia' OR 'Cameroon' OR 'Cabo Verde' OR 'Congo' OR 'Cote d Ivoire' OR 'Djibouti' OR 'Egypt' OR 'El Salvador' OR 'Georgia' OR 'Ghana' OR 'Guatemala' OR 'Guyana' OR 'Honduras' OR 'Indonesia' OR 'India' OR 'Kiribati' OR 'Kosovo' OR 'Kyrgyzstan' OR 'Kyrgyz' OR 'Laos' OR 'lao' OR 'Lesotho' OR 'Mauritania' OR 'Micronesia' OR 'mariana' OR 'Moldova' OR 'Mongolia' OR 'Morocco' OR 'Nicaragua' OR 'Nigeria' OR 'Pakistan' OR 'Papua New Guinea' OR 'Paraguay' OR 'Philippines' OR 'Poland' OR 'Independent State of Samoa' OR 'Atlantic Islands' OR 'Sao Tome' OR Principe OR 'Senegal' OR 'Melanesia' OR 'Solomon islands' OR 'Sri Lanka' OR 'Sudan' OR 'Swaziland' OR 'Eswatini' OR 'Syria' OR 'East Timor' OR 'Timor leste' OR 'Ukraine' OR 'Uzbekistan' OR 'Vanuatu' OR 'Vietnam' OR 'Middle East' OR 'west bank' OR 'Gaza' OR 'Yemen' OR 'Zambia' OR 'Angola' OR 'Albania' OR 'Algeria' OR 'Argentina' OR 'Samoa' OR 'Azerbaijan' OR 'Republic of Belarus' OR 'Belize' OR 'Bosnia-Herzegovina' OR 'Botswana' OR 'Brazil' OR 'Bulgaria' OR 'Chile' OR 'China' OR 'Colombia' OR 'Costa Rica' OR 'Croatia' OR 'Cuba' OR 'Czech' OR 'Czechoslovakia' OR 'Dominica' OR 'Dominican Republic' OR 'Ecuador' OR 'Estonia' OR 'Equatorial Guinea' OR 'Fiji' OR 'Gabon' OR 'Grenada' OR 'Iran' OR 'Iraq' OR 'Jamaica' OR 'Jordan' OR 'Kazakhstan' OR 'Latvia' OR 'Lebanon' OR 'Libya' OR 'Lithuania' OR 'Macedonia' OR 'Malaysia' OR 'Indian Ocean Islands' OR 'Maldives' OR 'Marshall Islands' OR 'Mauritius' OR 'Mexico' OR 'Montenegro' OR 'Namibia' OR 'Palau' OR 'Panama' OR 'Peru' OR 'Romania' OR 'Russia' OR 'Russian Federation' OR 'Serbia' OR 'Seychelles' OR 'Slovakia' OR 'Slovak' OR 'South Africa' OR 'Saint Lucia' OR 'Saint Vincent and the Grenadines' OR 'Suriname' OR 'Thailand' OR 'Tonga' OR 'Tunisia' OR 'Turkey' OR 'Turkmenistan' OR 'Tuvalu' OR 'Venezuela' OR Palestine OR Palestinian OR 'low resource' OR 'under-resourced' OR 'resource poor' OR 'under-developed' OR 'underdeveloped' OR 'developing country' OR 'developing countries' OR 'developing world' OR 'third world' OR lmic OR (low AND middle AND income)) | 10,992,352 |
| #3 Pediatrics | 'pediatric hospital'/exp OR 'child'/exp OR 'infant'/exp OR 'adolescent'/exp OR 'pediatrics'/exp OR 'minor (person)'/exp OR (infant OR infants OR infancy OR newborn OR newborns OR neonatal OR neonate OR neonates OR baby OR babies OR preterm OR prematurity OR toddler OR toddlers OR boy OR boys OR boyhood OR girl OR girls OR girlhood OR kid OR kids OR child OR childhood OR children OR adolescent OR adolescents OR adolescence OR juvenile OR juveniles OR youth OR youths OR teen OR teens OR teenager OR teenagers OR teenaged OR teenage OR 'young person' OR 'young persons' OR 'young people' OR pediatric OR pediatrics OR paediatric OR paediatrics OR minors) | 6,293,776 |
| #4 Combined | #1 AND #2 AND #3 | 3,102 |
| # 5 Filter Editorials, etc. | #4 NOT ('editorial'/exp OR [editorial]/lim OR 'letter'/exp OR [letter]/lim OR 'note'/exp OR [note]/lim OR [conference abstract]/lim OR 'conference abstract'/exp OR 'conference abstract'/it) | 2,373 |
| #6 Humans only | #5 NOT (([animals]/lim NOT [humans]/lim) | 2,356 |

**Web of Science Core Collection (via Clarivate)  
Search date: 12/2/2022**

|  |  |  |
| --- | --- | --- |
| Concept | Strategy | Results |
| #1 VP Shunts | TS=("Ventriculoperitoneal Shunt\*" OR "ventriculo-peritoneal shunt\*" OR "VP Shunt" OR "VP shunts" OR VPS OR ventricularperitoneal OR "ventricular peritoneal" OR "VP Shunt\*" OR VPS) | 9,859 |
| #2 Developing Countries | TS=("Afghanistan" OR "Bangladesh" OR "Benin" OR "Burkina Faso" OR "Burundi" OR "Cambodia" OR "cabo verde" OR "Central African Republic" OR "Chad" OR "Comoros" OR "Democratic Republic of the Congo" OR "Eritrea" OR "Ethiopia" OR "Gambia" OR "Guinea" OR "Guinea-Bissau" OR "Haiti" OR "Kenya" OR "Democratic People's Republic of Korea" OR "Liberia" OR "Madagascar" OR "Malawi" OR "Mali" OR "Mozambique" OR "Myanmar" OR "Nepal" OR "Niger" OR "Rwanda" OR "Sierra Leone" OR "Somalia" OR "Tajikistan" OR "Tanzania" OR "Togo" OR "Uganda" OR "Zimbabwe" OR "Armenia" OR "Bhutan" OR "Bolivia" OR "Cameroon" OR "Cabo Verde" OR "Congo" OR "Cote d'Ivoire" OR "Djibouti" OR "Egypt" OR "El Salvador" OR "Georgia" OR "Ghana" OR "Guatemala" OR "Guyana" OR "Honduras" OR "Indonesia" OR "India" OR “Kiribati” OR "Kosovo" OR "Kyrgyzstan" OR "Kyrgyz" OR "Laos" OR "lao" OR "Lesotho" OR "Mauritania" OR "Micronesia" OR "mariana" OR "Moldova" OR "Mongolia" OR "Morocco" OR "Nicaragua" OR "Nigeria" OR "Pakistan" OR "Papua New Guinea" OR "Paraguay" OR "Philippines" OR "Poland" OR "Independent State of Samoa" OR "Atlantic Islands" OR "Sao Tome" OR Principe OR "Senegal" OR "Melanesia" OR "Solomon islands" OR "Sri Lanka" OR "Sudan" OR "Swaziland" OR "Eswatini" OR "Syria" OR "East Timor" OR "Timor leste" OR "Ukraine" OR "Uzbekistan" OR "Vanuatu" OR "Vietnam" OR "Middle East" OR "west bank" OR "Gaza" OR "Yemen" OR "Zambia" OR "Angola" OR "Albania" OR "Algeria" OR "Argentina" OR "Samoa" OR "Azerbaijan" OR "Republic of Belarus" OR "Belize" OR "Bosnia-Herzegovina" OR "Botswana" OR "Brazil" OR "Bulgaria" OR "Chile" OR "China" OR "Colombia" OR "Costa Rica" OR "Croatia" OR "Cuba" OR "Czech" OR "Czechoslovakia" OR "Dominica" OR "Dominican Republic" OR "Ecuador" OR "Estonia" OR "Equatorial Guinea" OR "Fiji" OR "Gabon" OR "Grenada" OR "Iran" OR "Iraq" OR "Jamaica" OR "Jordan" OR "Kazakhstan" OR "Latvia" OR "Lebanon" OR "Libya" OR "Lithuania" OR "Macedonia" OR "Malaysia" OR "Indian Ocean Islands" OR "Maldives" OR “Marshall Islands” OR "Mauritius" OR "Mexico" OR "Montenegro" OR "Namibia" OR "Palau" OR "Panama" OR "Peru" OR "Romania" OR "Russia" OR "Russian Federation" OR "Serbia" OR "Seychelles" OR "Slovakia" OR "Slovak" OR "South Africa" OR "Saint Lucia" OR "Saint Vincent and the Grenadines" OR "Suriname" OR "Thailand" OR "Tonga" OR "Tunisia" OR "Turkey" OR "Turkmenistan" OR "Tuvalu" OR "Venezuela" OR Palestine OR Palestinian OR "low resource" OR "under-resourced" OR "resource poor" OR "under-developed" OR "underdeveloped" OR "developing country" OR "developing countries" OR "developing world" OR "third world" OR lmic OR (low AND middle AND income)) | 4,229,112 |
| #3 Pediatrics | TS=("Hospitals, Pediatric" OR infant OR infants OR infancy OR newborn OR newborns OR neonatal OR neonate OR neonates OR baby OR babies OR preterm OR prematurity OR toddler OR toddlers OR boy OR boys OR boyhood OR girl OR girls OR girlhood OR kid OR kids OR child OR childhood OR children OR adolescent OR adolescents OR adolescence OR juvenile OR juveniles OR youth OR youths OR teen OR teens OR teenager OR teenagers OR teenaged OR teenage OR "young person" OR "young persons" OR "young people" OR pediatric OR pediatrics OR paediatric OR paediatrics OR minors) | 3,995,454 |
| #4 Combined | #1 AND #2 AND #3 | 158 |
| # 5 Filter Editorials, etc. | Web of Science filter for "Article," "Review Article," and "Early Access" | 154 |

**Global Index Medicus (GMI)  
Search date: 12/2/2022**

|  |  |  |
| --- | --- | --- |
| Concept | Strategy | Results |
| #1 VP Shunts | "Ventriculoperitoneal Shunt\*" OR "ventriculo-peritoneal shunt\*" OR "VP Shunt" OR "VP shunts" OR VPS OR ventricularperitoneal OR "ventricular peritoneal" OR "VP Shunt\*" OR VPS | 789 |
| #2 Developing Countries | "Afghanistan" OR "Bangladesh" OR "Benin" OR "Burkina Faso" OR "Burundi" OR "Cambodia" OR "cabo verde" OR "Central African Republic" OR "Chad" OR "Comoros" OR "Democratic Republic of the Congo" OR "Eritrea" OR "Ethiopia" OR "Gambia" OR "Guinea" OR "Guinea-Bissau" OR "Haiti" OR "Kenya" OR "Democratic People's Republic of Korea" OR "Liberia" OR "Madagascar" OR "Malawi" OR "Mali" OR "Mozambique" OR "Myanmar" OR "Nepal" OR "Niger" OR "Rwanda" OR "Sierra Leone" OR "Somalia" OR "Tajikistan" OR "Tanzania" OR "Togo" OR "Uganda" OR "Zimbabwe" OR "Armenia" OR "Bhutan" OR "Bolivia" OR "Cameroon" OR "Cabo Verde" OR "Congo" OR "Cote d'Ivoire" OR "Djibouti" OR "Egypt" OR "El Salvador" OR "Georgia" OR "Ghana" OR "Guatemala" OR "Guyana" OR "Honduras" OR "Indonesia" OR "India" OR “Kiribati” OR "Kosovo" OR "Kyrgyzstan" OR "Kyrgyz" OR "Laos" OR "lao" OR "Lesotho" OR "Mauritania" OR "Micronesia" OR "mariana" OR "Moldova" OR "Mongolia" OR "Morocco" OR "Nicaragua" OR "Nigeria" OR "Pakistan" OR "Papua New Guinea" OR "Paraguay" OR "Philippines" OR "Poland" OR "Independent State of Samoa" OR "Atlantic Islands" OR "Sao Tome" OR Principe OR "Senegal" OR "Melanesia" OR "Solomon islands" OR "Sri Lanka" OR "Sudan" OR "Swaziland" OR "Eswatini" OR "Syria" OR "East Timor" OR "Timor leste" OR "Ukraine" OR "Uzbekistan" OR "Vanuatu" OR "Vietnam" OR "Middle East" OR "west bank" OR "Gaza" OR "Yemen" OR "Zambia" OR "Angola" OR "Albania" OR "Algeria" OR "Argentina" OR "Samoa" OR "Azerbaijan" OR "Republic of Belarus" OR "Belize" OR "Bosnia-Herzegovina" OR "Botswana" OR "Brazil" OR "Bulgaria" OR "Chile" OR "China" OR "Colombia" OR "Costa Rica" OR "Croatia" OR "Cuba" OR "Czech" OR "Czechoslovakia" OR "Dominica" OR "Dominican Republic" OR "Ecuador" OR "Estonia" OR "Equatorial Guinea" OR "Fiji" OR "Gabon" OR "Grenada" OR "Iran" OR "Iraq" OR "Jamaica" OR "Jordan" OR "Kazakhstan" OR "Latvia" OR "Lebanon" OR "Libya" OR "Lithuania" OR "Macedonia" OR "Malaysia" OR "Indian Ocean Islands" OR "Maldives" OR “Marshall Islands” OR "Mauritius" OR "Mexico" OR "Montenegro" OR "Namibia" OR "Palau" OR "Panama" OR "Peru" OR "Romania" OR "Russia" OR "Russian Federation" OR "Serbia" OR "Seychelles" OR "Slovakia" OR "Slovak" OR "South Africa" OR "Saint Lucia" OR "Saint Vincent and the Grenadines" OR "Suriname" OR "Thailand" OR "Tonga" OR "Tunisia" OR "Turkey" OR "Turkmenistan" OR "Tuvalu" OR "Venezuela" OR Palestine OR Palestinian OR "low resource" OR "under-resourced" OR "resource poor" OR "under-developed" OR "underdeveloped" OR "developing country" OR "developing countries" OR "developing world" OR "third world" OR lmic OR (low AND middle AND income) | 439,875 |
| #3 Pediatrics | "Hospitals, Pediatric" OR infant OR infants OR infancy OR newborn OR newborns OR neonatal OR neonate OR neonates OR baby OR babies OR preterm OR prematurity OR toddler OR toddlers OR boy OR boys OR boyhood OR girl OR girls OR girlhood OR kid OR kids OR child OR childhood OR children OR adolescent OR adolescents OR adolescence OR juvenile OR juveniles OR youth OR youths OR teen OR teens OR teenager OR teenagers OR teenaged OR teenage OR "young person" OR "young persons" OR "young people" OR pediatric OR pediatrics OR paediatric OR paediatrics OR minors | 446,373 |
| #4 Combined | #1 AND #2 AND #3 (searched as one query) | 31 |