Online Resource 5: Strengths and weaknesses of different surveillance

1. Cohort event monitoring	
Strengths	
• High follow-up rate (9)	Ampadu 2018, Bassi 2013, Fimbo 2022, Khaemba 2023, Praet 2022, TonaLutete 2021, Tebaa 2022, Izadi 2023, K 2014
• Large sample size (9)	Fimbo 2022, Gebreyesus 2022, Khaemba 2023, Kimutai 2017, Mussa 2021, Osibogun 2023, Praet 2022, Aliyari 2022, K 2014
• Collaboration with public health programs (1)	Didier 2019
• Systematic monitoring (1)	Ampadu 2018
Limitations	
• Potential underreporting of mild adverse events (10)	Ampadu 2018, Bassi 2013, Fimbo 2022, Gebreyesus 2022, Osibogun 2023, Praet 2022, TonaLutete 2021, Tebaa 2022, Nsubuga 2023, Soltani 2023
• Limited baseline data (2)	Ampadu 2018, Bassi 2013
• Recall bias (2)	Osibogun 2023, Nsubuga 2023
• Logistics challenges (1)	Kimutai 2017
2. Other prospective cohort studies	
Strengths	
• Large sample size (26)	Borisov 2019, Khaemba 2021, Rouamba 2018, Villanueva 2023, Le 2024, Enayatrad 2023, Kang 2023, Odeh 2023, Weschawalit 2023, Xinyao 2023, Manda 2022, Abdel-Qader 2022, Parida 2022, Undugodage 2021, Zhang 2021, Sarraf 2021, García-Grimshaw 2021, Kaur 2021, Arora 2020, Qamar 2020, Bailey 2016, Chen 2015, Berhane 2014, Chen 2014, Asturias 2013, Lv 2013
• High follow-up rate (8)	Ndagije 2018, Nzolo 2013, Mosha 2014, Satari 2023, Sebastian 2022, Nandini 2022, Faridi 2015, Bravo 2014
• Robust data collection (2)	Groome 2020, Cecconi 2020

• Standardization (2)	Sharan 2022, Perez-Vilar 2018
• Systematic monitoring (1)	Bashorun 2024

Limitations

• Limited sample size (41)	Mann 2015, Wu 2024, Angkasekwinai 2022, Hussein 2020, Atmaja 2024, Oliveira 2024, Villanueva 2024, SadatLarijani 2024, Tan-Lim 2023, Satari 2023, Soegiarto 2023, Xu 2023, Sharma 2023, Kasukurthi 2023, Agarwal 2023, Zhang 2023, TSathyapalan 2022, Bhowmick 2022, Teli 2022, Mugosa 2022, Amer 2021, Kamal 2021, Kiran 2021, Alam 2020, James 2020, Sankhi 2020, DePrado 2019, Mary 2019, Phan 2019, Farida 2019, Bansal 2018, Kaur 2018, Uribe-San-Mart√≠n 2017, Karami 2017, Mukherjee 2017, Bravo 2014, Fu 2014, Remesh 2014, Baron 2013, Shah 2013, Miyaji 2013
• Potential underreporting (37)	Bashorun 2024, Ejekam 2017, Groome 2020, Kajungu 2021, Nzolo 2013, Rouamba 2020, Shaum 2022, Rouamba 2018, Nsubuga 2023, John 2014, Le 2024, Mauas 2023, Manda 2022, James 2022, Parida 2022, Reddy 2022, Teli 2022, Reid 2022, Mohakuda 2021, Paramkusham 2021, García-Grimshaw 2021, Li 2021, Alam 2020, Arora 2020, Leopoldino 2019, Farida 2019, Mukherjee 2017, Suman 2017, delasSalas 2016, Chen 2015, Mohan 2015, Qiu 2015, Huang 2014, Fu 2014, Alvarez 2013, Mishra 2013, Lv 2013
• Single-center study (13)	Jose 2022, Chatterjee 2023, Teli 2022, Alam 2020, James 2020, Mary 2019, Farida 2019, Siroosbakht 2019, Bansal 2018, Kaur 2018, Mukherjee 2017, Asturias 2013, Das 2013
• Recall bias (10)	Khaemba 2021, Mosha 2014, Nsubuga 2023, Odeh 2023, Agarwal 2023, Macías Saint-Gerons 2022, Abdel-Qader 2022, Teli 2022, Nandini 2022, Kaur 2021
• Selection bias (2)	Perez-Vilar 2018, Crawford 2014
• Limited baseline data (1)	Bashorun 2024

3. Pregnancy exposure registries

Strengths

• Large sample size (4)	Rouamba 2018, Sancovski 2019, TavaresVerasFlorentino 2023, Zhao 2022
• High follow-up rate (3)	Asavapiriyanont 2018, Goruntla 2023, Mosha 2014
• Analytical rigor (1)	TavaresVerasFlorentino 2023
• Multiple outcomes (1)	TavaresVerasFlorentino 2023

Limitations

• Limited sample size (3)	Arulappen 2022, Jindal 2024, Kantharaja 2023
• Potential underreporting (3)	Rouamba 2018, Tinto 2015, Vanlalhruaii 2018
• Retrospective design (3)	Sancovski 2019, Tripathy 2023, Vanlalhruaii 2018
• Recall bias (2)	Asavapiriyanont 2018, Mosha 2014
• Limited details on gestational age (1)	Dellicour 2013
• Single-center study (1)	Zhao 2023
4. Targeted/Enhanced spontaneous reporting	
Strengths	
• Large sample size (8)	TavaresVerasFlorentino 2023, Baay 2017, Alijani 2023, Clemens 2022, Zhao 2022, Sancovski 2019, Kartal 2015, Kulkarni 2013
• High follow-up rate (2)	Goruntla 2023, Gupta 2023
• Analytical rigor (1)	TavaresVerasFlorentino 2023
• Multiple outcomes (1)	TavaresVerasFlorentino 2023
• Standardization (1)	Perez-Vilar 2018
Limitations	
• Single-center study (8)	Gupta 2023, Zhao 2023, Alijani 2023, Cao 2022, Hidayat 2022, Sun 2020, Bansal 2018, Kartal 2015
• Retrospective design (7)	Tripathy 2023, Cao 2022, Horodnycha 2021, Sancovski 2019, Mathews 2019, Vanlalhruaii 2018, Olivera 2017
• Limited sample size (5)	García-Paba 2023, Huang 2022, Arulappen 2022, Azimi 2021, Bansal 2018
• Potential underreporting (3)	Baay 2017, Vanlalhruaii 2018, Huang 2014
5. Other studies	
Strengths	
• Large sample size (3)	Vanegas 2021, Richardus 2018, Kavosh 2022

• High follow-up rate (2)	Zeng 2022, Kavosh 2022
Limitation	
• Limited sample size (11)	Alsbou 2015, Dixit 2024, Hewawasam 2023, Sharafi 2016, Zeng 2022, Arikoglu 2015, García-Paba 2023, Alam 2020, Can 2019, ArslanogluAydin 2022, Nurzak 2022
• Single-center study (4)	Zeng 2022, Cao 2023, Alam 2020, ArslanogluAydin 2022
• Recall bias (3)	Vanegas 2021, Dixit 2024, Nguyen 2022
• Potential underreporting (1)	Alam 2020
6. Retrospective cohort studies	
Strength	
• Large sample size (8)	TavaresVerasFlorentino 2023, Baay 2017, Alijani 2023, Clemens 2022, Zhao 2022, Sancovski 2019, Kartal 2015, Kulkarni 2013
• Analytical rigor (1)	TavaresVerasFlorentino 2023
• High follow-up rate (2)	Goruntla 2023, Gupta 2023
• Multiple outcomes (1)	TavaresVerasFlorentino 2023
• Standardization (1)	Perez-Vilar 2018
Limitations	
• Single-center study (8)	Gupta 2023, Zhao 2023, Alijani 2023, Cao 2022, Hidayat 2022, Sun 2020, Bansal 2018, Kartal 2015
• Retrospective design (7)	Tripathy 2023, Cao 2022, Horodnycha 2021, Sancovski 2019, Mathews 2019, Vanlalhruaii 2018, Olivera 2017
• Limited sample size (5)	García-Paba 2023, Huang 2022, Arulappen 2022, Azimi 2021, Bansal 2018
• Potential underreporting (3)	Baay 2017, Vanlalhruaii 2018, Huang 2014
• Selection bias (2)	Perez-Vilar 2018, Crawford 2014
• Recall bias (1)	Kulkarni 2013