

A priori use of theories and conceptual frameworks for policy analysis: a scoping review of empirical research on health financing policy processes in Sub-Saharan Africa

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Abstract

Health financing policies are critical policy instruments to achieve Universal Health Coverage, and they constitute a key area in policy analysis literature for the health policy and systems research (HPSR) field. Previous reviews have shown that analyses of policy change in low- and middle-income countries are under-theorized. This study aims to explore which theories and conceptual frameworks have been used in research on policy processes of health financing policy in Sub-Saharan Africa and to identify challenges and lessons learned from their use. We conducted a scoping review of literature published in English and French between 2000-2017. We analyzed 23 papers selected as studies of health financing policies in Sub-Saharan African countries using policy process or health policy-related theory or conceptual framework *ex ante*. Theories and frameworks used alone were from political science (35%), economics (9%), and health policy and systems research field (17%). Thirty-five percent of authors adopted a “do-it-yourself” (*bricolage*) approach combining theories and frameworks from within political science or between political science and HPSR. Kingdon’s multiple streams theory (22%), Grindle and Thomas’ arenas of conflict (26%), and Walt and Gilson’s policy triangle (30%) were the most used. Authors select theories for their empirical relevance, methodological rational (comparison), availability of examples in literature, accessibility, and consensus. Authors cite few operational and analytical challenges in using theory. The hybridization, diversification, and expansion of mid-range policy theories and conceptual frameworks used deductively in health financing policy reform research are issues for HPSR to consider. We make three recommendations for researchers in the HPSR field. Future research on health financing policy change processes in Sub-Saharan Africa should include reflection on learning and challenges for using policy theories and frameworks in the context of HPSR.

INTRODUCTION

Over the past 15 years, there has been a growth in research efforts towards a better understanding of policy processes for health systems in low- and middle-income countries (LMICs). For example, the Alliance for Health Policy and Systems Research (the Alliance) has compiled and published tools for training researchers interested in such processes within the field of health policy and systems research (HPSR). Their *HPSR Methodology Reader* (Gilson 2012), available in multiple languages, represents a case in point: it offers methodological advice and strategies for policy analysis in HPSR, and provides an overview of conceptual frameworks (mainly descriptive or heuristic) on systems perspectives and key health system issues like accountability, corruption, financing, trust, and human resources for the design of HPSR studies. More recently, the Alliance released a *Health Policy Analysis Reader* to update the theoretical and conceptual underpinnings for health policy analysis in LMICs, underscoring the importance of theories from political science, economics, and policy studies in “analytical approaches that integrated politics, process, and power into the study of health policies.” (Gilson et al. 2018)[p. 11].

Applying theories of the policy process in health policy analysis enables a systematic and organized appraisal of the conditions, constraints, contexts, actors, and institutional arrangements as well as an appreciation of the stakeholders, determinants, and politics of reform (Bernier & Clavier 2011; Cairney 2020; de Leeuw et al. 2014; Gilson et al. 2018). For example, the use of theories explaining policy and political factors provides more nuanced understanding of health policy changes than explanations offered by investigating the financial capacities of states in West Africa (Ridde 2015). Beaussier (2017) argues that the

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3 use of theories and frameworks from political science would also strengthen comparative
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5 approaches to understand the influences on health and social protection policy reform within
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7 and between countries in Africa. In brief, applying appropriate theories of the policy process
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9 to empirical problems creates opportunities to use theoretical knowledge to develop research
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11 questions and guide analysis on “*why* things are (not) happening beyond a mere description
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13 *that* they are (not) happening,” such as in cases of implementation failure (de Leeuw et al.
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15 2014)[p. 3].
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21 However, despite agreement that theories of the policy process are important conceptual tools
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23 for health policy analysts to describe and explain phenomenon of interest to HPSR,
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25 researchers have found that theory remains underused in HPSR in LMICs (Berlan et al. 2014;
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27 Erasmus et al. 2014; Gilson 2012; Shearer et al. 2016). This finding is echoed in systematic
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29 reviews investigating the use of policy theories and conceptual frameworks more globally for
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31 health policy analysis in health promotion (Breton & De Leeuw 2011), on social determinants
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33 of health and health equity (Embrett & Randall 2014), on obesity prevention policy (Clarke et
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35 al. 2016), and for governance of health systems (Pyone et al. 2017).
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42 Health financing represents a core building block and function of health systems (Kutzin
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44 2001). Degroote et al.’s (Degroote et al. 2019) review mapped research designs and methods
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46 in literature on impact of health financing reforms in Sub-Saharan Africa, but to our
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48 knowledge there is a gap in the literature reviewing theoretical tools used in empirical studies
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50 to analyze this function. Health financing encompasses catalytic functions like collecting
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52 revenues to finance and deliver healthcare, pooling health funds and risks, and purchasing
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54 healthcare (Kutzin 2001). Health financing policies are thus critical pieces in the puzzle of
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56 public policy instruments to achieve Universal Health Coverage (UHC) because they seek to
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regulate the supply of health system resources and demand for coverage of health care and prevention services (Kutzin 2013; Sambo & Kirigia 2014). As such, the politics and power in decision-making processes on health financing reforms and their implementation influence health services provision, financial protection, and equity of access to care (Schieber et al. 2006). Health financing involves a range of possible policy instruments to serve these functions, including but not limited to health insurance, social health insurance, community-based insurance, community health fund, user-fee exemption / removal, conditional cash transfers / payments, and performance-based financing.

Using policy process theories to study the development, formulation, coordination, and implementation of health financing policy is critical to respond to challenges such as those noted by Schieber et al. (2006), like how to understand policy sub-systems at different levels. For example, WHO's tools for decision-makers on how to develop health financing policies do not take into account the underlying policy and political processes involved in producing national strategies (Kutzin et al. 2017). Current guidance for countries summarizes key contextual factors at the national level such as fiscal capacity, structure of public administration, and public sector financial management (McIntyre & Kutzin 2016). Such guidance is useful for government authorities engaged in achieving UHC, but it does not address issues concerning the intrinsic political nature or underlying political economy of health financing policy processes with which policy actors within and outside of government must navigate, manage, and negotiate. For instance, Nauleau et al. (2013) argue that the promotion of UHC has contributed to increased reform and implementation of health financing policies since 2010, particularly in Sub-Saharan Africa. But Gautier & Ridde's (2017) review on health financing policy processes in Sub-Saharan Africa showed that external sources of power and influence from donors pervade all phases of the policy process

with consequences for country ownership. Research that uses policy theories is needed to advance theoretically informed understandings of politics, governance, and power in health financing policy processes, as a critical contribution to knowledge on the challenges and realities of achieving UHC.

This study aims to assess the scope of the literature on health financing policy processes in sub-Saharan Africa (SSA), to inventory theories and conceptual frameworks used in empirical research on health financing policy change in SSA, and to summarize challenges, innovations and lessons learned from the use of these theories and frameworks. This review was part of a larger project comparing policy processes in health (insurance) and mining sectors in two countries in SSA (Deville et al. 2018). Specifically, this paper responds to the question: what theories and conceptual frameworks have been used to study health financing policy-making processes and policy change in SSA since 2000? We intend for the findings to highlight the choices, learning, and challenges with using theories and conceptual frameworks to analyze health financing policy process in SSA and to advance theory-driven policy analysis in the health financing policy area of HPSR.

METHODS

We used a scoping study design following a stepwise approach (Arksey & O'Malley 2005; Levac et al. 2010) informed by refinements to the method (Colquhoun et al. 2014; Levac et al. 2010).

Search strategy

We developed a search strategy that covered three dimensions of the relevant studies for our review: 1) the policy area of interest (health financing strategies), 2) the object of interest

(policy processes/change), and 3) the geographical coverage (SSA). We used a composite approach to construct each dimension separately before combining them together in each database when option was available [Table 1]. We gathered the health financing policy terms from key documents on UHC and the terms used by Gautier and Ridde’s (2017) review of government ownership in health financing policy processes. We drew the policy process/change terms from the public policy literature on the stages of the policy process, the main variables of policy change (i.e. the three Is – interests, ideas, institutions), and other conceptual and empirical terms for policy actors and influences generally used in public policy theory, practice, and analysis (Cairney 2020; Sabatier 2007). We used a French dictionary of public policy (Boussaguet et al. 2014) to validate French language translations of these terms. We defined the countries included in our geographical zone of interest according to the World Bank’s list of 48 countries in SSA (<https://data.worldbank.org/region/sub-saharan-africa>). The search strategy was developed iteratively by the first author through multiple rounds of testing different combinations of terms in databases, in consultation with co-authors, and with input from an expert in systematic and scoping reviews. It was also discussed and validated by the political science co-investigators of the wider project.

Using the terms and combinations in Table 1, in November 2017 we searched titles and abstracts in Global health (Ovid), PubMed, Web of Science, PAIS index (Proquest), and Cairn (a Francophone database), to collect scientific and grey empirical literature indexed in health and social science databases. We limited our search to material available in English and French published between 2000 and 2017.

Study selection

The first author followed a three-stage process to independently screen and select studies for analysis, consulting with both co-authors for verification. Questions and issues arising about the application of inclusion and exclusion criteria [Table 2] were regularly discussed between all authors before final selection decisions. In the first stage, titles were screened for meeting criteria related to the policy area to exclude studies unrelated to health financing policies in SSA. In the second stage, abstracts (and some full texts) were screened for meeting criteria related to the policy process and policy change focus of the studies. During this stage, we made decisions based on the research questions or objectives of the studies. In the third stage, we screened full text articles for meeting the essential criteria for studies to be selected for analysis: the presence of a policy process or health policy related theory or conceptual framework *ex ante*. We used Ridde et al.'s (Ridde et al. 2020) adapted typology of theories according to their levels of abstraction with Nilsen's (Nilsen 2015) definition of a conceptual framework to guide our selection of studies using mid-range theories and conceptual frameworks [Table 3]. We excluded grand theories because we focus on theories that structure observation, description, and explanation of phenomena specific to policy process and change and not a broad range of social phenomena. We excluded program theories because we focus on analysis of public policy as part of the wider policy-making processes and not the logic, design, implementation, or evaluation of interventions.

Charting the data

We extracted data from the studies selected for analysis to assess the geographical, policy, methodological, and theoretical scope of this literature. We charted extracted data in an excel sheet with columns for each item in Box 1. We did not systematically extract data on the results/findings of the studies since this was outside the scope of the review's objectives and research question. In some instances, such data was extracted when pertaining to the

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challenges or learning of authors from working with the mid-range theory or conceptual framework; although this data (when available) was generally collected from the discussion section of the paper.

Collating, summarizing, and reporting results

We collated and summarized the results on publication characteristics, geographical coverage of studies, types of policies studied, and research design and methods according to the items for numerical analysis recommended for presenting scoping results (Arksey & O'Malley 2005; Levac et al. 2010). We categorized the affiliations of first authors of the studies according to whether the institution was in SSA or not, and whether the first author had affiliations in northern and/or southern institutions. We organized results according to the mid-range theories and conceptual frameworks identified in the analysis. We created a third category emergent from our analyses for *bricolage* to classify those studies wherein authors built and combined frameworks drawing on multiple theories and/or conceptual frameworks. We analyzed theoretical material according to disciplinary origins and authors' reflections on their use.

Consultation

We included a consultation phase in the study, which is an optional step in scoping methodology (Arksey & O'Malley 2005; Levac et al. 2010). We presented and discussed preliminary results with participants in a research workshop in Senegal in 2018. The participants included social science and public health researchers from Belgium, Canada, France, Mali, and Senegal as well as decision-makers from the health and mining sectors in the latter two countries. The research team and decision-maker partners in the larger project wanted to learn from challenges in using theories and conceptual frameworks to study health

financing policies in SSA in order to inform methodology for case studies and analysis on health insurance and mining policy in Senegal and Mali.

Upon completion of the initial data analysis, we carried out a survey among the first authors of the studies selected for analysis. Given the limited data collected in our review providing insights to the challenges and learning of authors using mid-range theories and conceptual frameworks to study health financing policy processes/change, we invited first/corresponding authors individually by email to respond to three open-ended questions. They were asked about their reasons and process for choosing the mid-range theory or conceptual framework for their study, and the challenges and learning from using and adapting it in this published research. Ten of the 23 authors (referred to below as: A1 to A23) replied to the survey.

RESULTS

The search identified 1652 records. Following the first two stages of screening for studies on policy process/change related to health financing policies in SSA, we pre-selected 108 relevant studies of which 85 were excluded with reasons [Supplemental file 1], with 23 papers eligible for inclusion in the analysis. These are shown in Figure 1, based on PRISMA guidance for reporting (Moher et al. 2009).

General publication profiles and characteristics of the 23 studies are summarized in Box 2. A large majority of the studies were published since 2011, and over half of them since 2015.

The studies were mainly published in the health science literature; 9 papers were published in *Health Policy and Planning*, and one study was published as a working paper in the grey literature. First authors were affiliated with institutions in SSA in one-third of the papers, and first authors had dual affiliations with northern institutions and institutions in SSA. The other

third of the papers had first authors with affiliations in European or North American institutions only.

The studies concerned a total of 16 countries in SSA [Figure 2]. Ghana (n=6), Burkina Faso (n=5) and South Africa (n=5) were the countries studied most this literature, covered in 66% of the articles analyzed given the four multi-country studies in our data set. Although French is an official language in 7 of the 16 countries of study (according to the International Organisation of La Francophonie), only 2 of the 23 studies were published in the French language (Kadio et al. 2017; Olivier de Sardan & Ridde 2012). A majority of studies concerned national health insurance (n=8) and user fee exemption (n=7), with performance-based financing (n=4) being the main focus of studies analyzed that were published in 2017 [Table 4]. Over half of the studies had study objectives or research question of an exploratory nature, including description, (n=15), while the others were of an explanatory type (n=8) [Table 4], based on types of research and categories of inquiry in HPSR (Gilson 2012)[pp. 42-51].

Mapping the theories and conceptual frameworks used

We found that 5 of the studies used a mid-range theory (Atuoye et al. 2016; Honda 2015; Kadio et al. 2017; Sieleunou et al. 2017; Zida et al. 2017) and 10 used a conceptual framework (Abuya et al. 2012; Agyepong & Adjei 2008; Bertone & Meessen 2013; Fusheini et al. 2017; Meessen et al. 2011; Olivier de Sardan & Ridde 2012; Onoka et al. 2013; Ridde & Morestin 2011; Thomas & Gilson 2004; van den Heever 2016). The mid-range theories and conceptual frameworks used alone within these categories were mainly from the disciplines of political science [multiple streams theory (Kadio et al. 2017; Sieleunou et al. 2017; Zida et al. 2017); advocacy coalition framework (Atuoye et al. 2016); stages heuristic (Olivier de Sardan

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3 & Ridde 2012; Ridde & Morestin 2011); policy translation (Fusheini et al. 2017); and
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5 political economy of reform in LMICs (Agyepong & Adjei 2008)], economics [principle
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7 agent theory (Honda 2015); new institutionalism (Bertone & Meessen 2013)], and the field of
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9 HPSR [policy triangle (Abuya et al. 2012; Meessen et al. 2011; Onoka et al. 2013; Thomas &
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11 Gilson 2004)]. A separate “do-it-yourself” category (*bricolage*) emerged from analysis
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13 wherein 8 of the studies involved authors combining theories and conceptual frameworks
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15 from others within political science (Chimhutu et al. 2015; Koduah et al. 2016; Pillay &
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17 Skordis-Worrall 2013; Pruce & Hickey 2016) or implementation science (Wilhelm et al.
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19 2016), or between political science and HPSR (Gilson et al. 2003; Onoka et al. 2015; Ridde et
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21 al. 2011). Altogether, 15 of the papers analyzed used a mid-range theory or conceptual
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23 framework from political science, and HPSR frameworks were used in 7 of them [Table 4].
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31 The most cited theories and conceptual frameworks were Kingdon’s multiple streams (n=3 on
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33 its own, n=2 in *bricolage*), Grindle and Thomas’ arenas of conflict (n=1 on its own, n=5 in
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35 *bricolage*), and Walt and Gilson’s policy triangle (n=4 on its own, n=3 in *bricolage*).
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38 Kingdon’s multiple streams is a theory of agenda-setting where in an “idea whose time has
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40 come” for attention on the government agenda is examined by identifying the coupling of
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42 issues, ideas, and interests in three streams, due to a focusing event that creates a window of
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44 opportunity for a policy entrepreneur to promote his/her policy solution. Grindle and Thomas’
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46 political economy of health reform in LMICs is a conceptual framework on the role of policy
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48 elites in shaping policy agendas and managing political and bureaucratic challenges of policy
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50 reform in developing countries. Walt and Gilson’s policy triangle is a health policy analysis
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52 framework that emphasizes the need to take account of who (actors) is involved and how
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54 (process) decisions are made, what (content) decisions are made and under what conditions
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56 (context). [see Supplemental file 2 for an overview of key elements and assumptions of each]
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Challenges and learning from using policy theories and conceptual frameworks

Choosing a mid-range theory or conceptual framework

Few authors reported on challenges with selecting, adapting and applying mid-range theories and conceptual frameworks to study health financing policy processes and change in SSA (Honda 2015; Sieleunou et al. 2017; Thomas & Gilson 2004; Zida et al. 2017). In data from the survey in the consultation phase, first authors reported selecting a mid-range theory or conceptual framework from the literature based on their assessment of its relevance to the research objective or question, with concepts to help the research team explore themes they want to analyze (A1, A2, A10, A19). Authors’ choices were guided by methodological rationale, for example to use the same framework comparatively for exploring cases of similar phenomenon in different political contexts or within a country at sub-national jurisdictions (A16) and (Meessen et al. 2011; Onoka et al. 2013). Choices were also influenced by the availability of ample empirical examples of their use in similar studies in the health policy literature (A9, A17, A18, A19). The “consensus-base” that has grown around the use of the stages heuristic, or policy cycle, (from public policy studies) and the policy triangle (from HPSR) also justify their selection, in addition to their characteristic of accessibility – allowing researchers to organize and present results to multidisciplinary audiences in an easily understandable way (A17, A18). In the field of HPSR, the policy triangle signposts key categories of focus to health policy and systems researchers, practitioners, and managers who are not familiar with policy process theories and analyses (A18).

Francophone researchers encounter additional linguistic challenges when selecting a theory or conceptual framework, given the limited availability of theoretical tools and texts in French,

and the lack of application in HPSR in West Africa that is published in French as empirical examples of their use (A9). When theories or frameworks are available in the French language (especially from political science), there are few to no studies that have operationalized them for HPSR in SSA (A9). Access to full texts and books that present the theory or framework selected is a challenge for authors without well-sourced libraries and bookshops in SSA (A2). Surprisingly, given that our criteria aimed to exclude *ex-post* theory use, two of the authors' replies to the survey suggested that they selected the mid-range theory/conceptual framework after the data collection was completed.

Working with a mid-range theory or conceptual framework

We characterize the challenges identified by authors as definitional-operational and empirical-analytical. For example, authors working with Kingdon's multiple streams theory (MST) noted that the "conceptual contours" of the policy and politics streams are unclear (A9), as are the distinctions between a decision agenda and a government agenda (A19) – which present challenges for analysis (Sieleunou et al. 2017). The operationalization and adaptation of a mid-range theory or conceptual framework for use with different levels of analysis or with stages of the policy process other than that for which it was originally proposed presents a challenge for HPSR researchers (Chimhutu et al. 2015; Honda 2015). The analysis itself can be a challenge for researchers working deductively with theory or frameworks, especially when the theoretical inferences do not fit with one's interpretations of the data (A10). One notable shared challenge across mid-range theories and conceptual frameworks relates to the consideration of interdependence and interactions between analytical categories and between levels of policy [e.g. between streams in MST (Sieleunou et al. 2017), between global and national policy processes (Chimhutu et al. 2015; Pruce & Hickey 2016), between ideas and

interests (Pruce & Hickey 2016), between policy formulation and implementation (Honda 2015; Meessen et al. 2011)].

Authors reported theoretical innovations from their use of theory, such as adapting the Kingdon’s MST to look for change within streams (i.e. problematization of an issue) and learning that organizations, as well as individuals, may be entrepreneurs (Kadio et al. 2017). Learning from the use of Grindle and Thomas’ political economy framework generated new questions about the effects of corruption on reform processes (Agyepong & Adjei 2008). Learning also produced reflections on the limitations of the mid-range theory or conceptual framework. For example, the focus on elites in political settlements is a theoretical limitation for exploring the role of NGOs in relationships between state and society (A16). Experience of *bricolage* in the political settlement framework demonstrated that incorporating the role of ideas and transnational actors was valuable for understanding interaction between the ruling and other policy coalitions (Pruce & Hickey 2016). Both the stages heuristic and health policy triangle conceptual frameworks were recognized as useful for description but limited in their analytical contributions to explain change or establish causal relationships (A17, A19). The health policy triangle was designed to be broad and applicable to range of settings and policy issues, serving as a starting point to develop an understanding of the key policy process with support from other concepts or empirical knowledge (A7). Researchers who are less familiar with understanding policy change from a political perspective have challenges in using such an open framework (A7). The health policy triangle therefore lends itself to being used for *bricolage*, in conjunction with other frameworks and methods, like stakeholder analysis (Abuya et al. 2012; Gilson et al. 2003; Onoka et al. 2013; Thomas & Gilson 2004).

There is general agreement across authors that the use of a mid-range theory or conceptual framework helps to orient the collection, organization, and analysis of data, and to support their understanding of health financing policy processes and their politics. In particular, mid-range policy theories and conceptual frameworks are valuable analytical tools to explore the fuzzy boundaries between the political and technical actors, knowledge and systems in health financing (Agyepong & Adjei 2008; Chimhutu et al. 2015; Gilson et al. 2003; Meessen et al. 2011). The process of working with a mid-range theory or conceptual framework is one of self-learning for those who do not have a political science background, with the benefit of an additional outcome as a formative part of their HPSR training (A9).

DISCUSSION

This scoping review of the mainly peer reviewed literature on health financing policy processes/change found that most papers are published in health journals catering to an audience of health policy and systems researchers and practitioners. Of the mid-range theories and conceptual frameworks most used in the papers analyzed, two come from political science (Kingdon's MST and Grindle and Thomas' political economy of health reform) and one comes from the field of HPSR (Walt and Gilson's health policy triangle). Walt and Gilson's health policy triangle is the most frequently used conceptual framework in the papers analyzed. Of the eight conceptual frameworks recommended in the *HPSR Methodology Reader* (Gilson 2012)[p. 64] to guide systematic inquiry and to better capture complexity of policy processes, Walt and Gilson's health policy triangle (1994) is the only one that is found in our results. In reflecting on conceptual and methodological challenges, Walt et al. (2008) suggest a list of the most "enduring examples" of theories and frameworks of the policy process that have been most used in the public policy and health policy literature based on results of Gilson and Raphael's review (Gilson & Raphaely 2008). Walt et al. (2008) present

three widely used frameworks of the policy process: the health policy triangle, the stages heuristic, and network frameworks. We found the first two of these three in our results.. Walt et al. (2008) present three influential theories of the policy process for health policy analysis: Kingdon’s MST, Baumgartner and Jones’ punctuated equilibrium theory, and implementation theories (e.g. Lipsky, Hill and Hupe). They reported few examples of the Advocacy Coalition Framework (ACF) and institutional rational choice theory used for HPSR in LMICs, despite being theories widely used in public policy analysis more generally. From their list of theories, we found the MST in our results, as well as the ACF.

Looking across the results of the mid-range theories and conceptual frameworks we found used *a priori* in the papers analyzed, we discuss the findings regarding their synthesis, adaptation, and theoretical/conceptual renewal or development in HPSR.

Hybridizing policy theories and conceptual frameworks

We created a *bricolage* category of results, as over one-third of the papers analyzed brought together different mid-range theories and conceptual frameworks used in their studies. By employing the term *bricolage* for this emergent category, we refer to the work of Denzin and Lincoln (2011) who describe *bricolage* as the methodological labor that qualitative (generally interdisciplinary) researchers do to piece together various elements (interpretations, theories, tools) as a strategy to deal with complexity. Specifically, our review sheds light on the work of “theoretical bricoleurs” in HPSR (Denzin & Lincoln 2011; Rogers 2012). The meaning of the term *bricolage* here differs from its use in policy research to refer to policy and institutional change and what decision-makers/administrators do to rearrange policy instruments or institutions in different combinations, particularly in times of crisis (Campbell

2004). However, policy researchers also engage in theoretical *bricolage* to build synthesis frameworks on policy process and change.

Our results on *bricolage* mirror a trend in public policy literature. For example, Pierce's review found that about half of applications of the ACF used it in combination with other theories/frameworks (Pierce et al. 2017), and Jones' review found about one-third of the applications of the MST integrated other theories/frameworks (Jones et al. 2016). Innovations in integrative approaches to theorization in public policy analysis and scholarship have arisen from what are referred to as synthesis theories and frameworks (Nowlin 2011), such as those of de Leeuw et al. (2016) and van Gestel et al. (2018) which have been respectively developed and illustrated with health policy. We found one example of this type of framework in our results. Pruce and Hickey (2016) used a synthesis framework on political settlement (Lavers & Hickey 2016) that was developed for analyzing social protection policies in LMICs.

International experts in public health research on health inequalities have also recognized the opportunities and benefits of hybridization of theories and conceptual frameworks for health policy research (Baum et al. 2018). Specifically, in the study of complex systems, multiple theories used together may provide an overarching frame with more explanatory power for the policy processes in a given context (Baum et al. 2018). Despite the recognition that the analysis of complex policy process may warrant the use of a combination of multiple theories to improve knowledge, the operationalization of this requires an understanding of the various theories and conceptual frameworks, as well as reflection on why and how one combines them. Cairney (2020)[pp.236-239] cautions those developing or working with synthetic and hybrid theories to ensure clearly defined terms (often theories use similar words to mean

something different) and to have a thorough understanding of the assumptions of the theories being combined, to merge them coherently and acknowledge inconsistencies. Theoretical *bricolage* offers a wide range of possibilities for HPSR to explore policy processes, with the caveat that HPSR researchers and research teams invest in acquiring the knowledge to work with a well-defined range of policy theories.

Diversifying policy theories and conceptual frameworks

The most frequently cited references to the theories and conceptual frameworks of Kindgon, Grindle and Thomas, and Walt and Gilson [Supplemental file 2] may point to a potential closed loop in the circulation of theoretical and conceptual tools for health financing policy analysis in SSA. These results suggest that researchers may prefer mid-range theories and conceptual frameworks on which there is considerable agreement in the field and ample examples of their use in the health policy literature, such as the health policy triangle and MST. Birken et al. found that familiarity and accessibility were among criteria that researchers used for selecting implementation theories, even though they were not on the list of criteria for theory selection developed from the literature, suggesting theory selection was often “haphazard or driven by convenience or prior exposure” (Birken et al. 2017). There are many pragmatic reasons that may underlie HPSR researcher’s choices for using a simplified framework, such as the lack of time to invest in learning about an unfamiliar theory, the need to publish results quickly, and being conceptually risk averse with a desire to use what is widely accepted in the field (conceptual “status quo”). Walt and Gilson refer to the health policy triangle as a “highly simplified model of an extremely complex set of interrelationships” (Walt & Gilson 1994)[p. 355]. Notably, the health policy triangle was also found to be the most commonly used overarching framework in a review by Gilson and Raphaely (2008); it is one of the influential frameworks (and papers) for health policy

analysis within the HPSR field. Its position as a standard framework found in this literature may also be interpreted as the sign of growing pains in a maturing practice of health policy analysis within HPSR. Perhaps the widespread use of the policy triangle is a sign of the establishment and institutionalization of the HPSR field with a conceptual framework that is a recognized heuristic by all of its members. As the HPSR field matures, researchers may need to be more theoretically adventurous to advance knowledge in conceptualizations for analyzing health financing policy processes, or at least move towards developing consensus in the field on which criteria are most important in selecting a theory (Birken et al. 2017).

When HPSR scholars rely primarily on older, more established theories and frameworks frequently used in HPSR, this may lead to missed opportunities to integrate contemporary challenges of global governance and UHC, such as the transnational actors that influence various levels of health financing policy, into conceptual approaches without efforts to reflect on and adapt them. For example, results of this scoping review underscore the challenge of authors using *bricolage* to consider interdependence and interactions between levels of health financing policy and governance (Chimhutu et al. 2015). The assumptions, conditions, and key elements of the three most used theories in our findings [Supplemental file 2] do not appear to represent the reality of polycentrism in global health policy making (Tosun 2017), nor explicitly incorporate this context into theoretical propositions (Gautier et al. 2018) – with the exception of the health policy triangles flexible level of analysis from local to international policy processes. We argue that the revised configuration of actors has implications for how we conceptualize and study of health financing policy-making in SSA, in particular how it relates to power as a core concept for health policy analysis (Erasmus & Gilson 2008; Gore & Parker 2019; Shiffman 2014; Sriram et al. 2018; Topp 2020). The results of this scoping review contain noteworthy examples of relevant theoretical starting

points for exploring and examining power in health financing policy and reform (Chimhutu et al. 2015; Koduah et al. 2016; Pruce & Hickey 2016), among other recent examples in the literature (Chemouni 2018; Dalglish et al. 2015; Gautier et al. 2020). For example, Abimbola et al. (2017) argue that the use of institutional approaches (which were rare in our findings) can equip HPSR researchers with theories and conceptual frameworks that support the examination of power in the governance of health systems, including health financing policy, by focusing on rules and institutions.

While the three most used theories and frameworks we found in the paper analyzed do not include state-of-the-art conceptual approaches available from the discipline of political science or field of public policy, the results show some innovations which have been used, such as neo-institutionalism (Bertone & Meessen 2013), policy transfer/translation (Fusheini et al. 2017; Pruce & Hickey 2016), and ideas in policy (Pruce & Hickey 2016). Notably, realist approaches, which have been applied to policy analysis of other health systems building blocks, were absent from the results. Robert et al.’s realist review and synthesis for mid-range theory building for policy analysis serves as a strong example of this approach (Robert et al. 2017). A previous review of the health policy analysis literature in LMICs published between 1994-2007 found that “little of the existing body of work draws on policy analysis theory to direct and guide analysis, deepen understanding, enable explanation and support generalization,” but mentioned theories of Kingdon (agenda-setting) and Lipsky (street-level bureaucracy) among those referred to in at least some articles (Gilson & Raphaely 2008). These observations are not intended to spark a normative debate on the rank or value of any particular theory or conceptual framework over another, but rather to highlight the potential missed opportunities to incorporate additional or competing understandings of processes and changes in health financing policies through the use of diverse theoretical

proposals towards developing more granular knowledge on development and implementation of health financing policies for UHC.

Expanding use of policy theories and conceptual frameworks

Applying theory in various contexts internationally is one way to revise and adapt, as well as contribute to understanding the differences between empirical settings. Expanding the use of policy theory in SSA for health financing policy analysis would be part of a larger process towards improving learning about theory operationalization and use in HPSR in response to some of the challenges reported by authors in our findings. Cairney (2020) [p.243] notes that reviews which take stock of the use and results from applying a particular theory in cases across countries are useful to build a knowledge base about learning. The empirical knowledge and conceptual learning from research on social policy (Kpessa & Béland 2013) or international relations (Smith 2009) in and on SSA are critical to explore the usefulness of theories and to contribute insights for revising theoretical understandings and interpretations of analysis from other contexts. The applications of prominent public policy theories in research on policy processes in African countries are limited in comparison to their application in North America and Europe across all policy domains and levels of government and governance. This has implications for the availability of examples of policy theory applied in the empirical health policy literature on Sub-Saharan Africa for health financing scholars to access and choose from which, as authors reported in our findings, influences their choice of theory or framework.

For example, a meta-review found 26 applications of MST in an African country, in contrast to 205 applications in European and 167 applications in North American countries (78% of 482 country codes for application were in Western democracies) (Jones et al. 2016).

Similarly, a review of the ACF found 13 applications in Africa, compared to 111 in European and 64 in North American (only USA and Canada) countries (Pierce et al. 2017). Saetran’s review showed that only 3-4% of the public policy implementation literature concerned a focus on Africa, and that which did was mainly published in non-core policy and political science journals (Saetren 2005). The conclusions of these reviews underline the importance of applying policy theories in multiple contexts/governing systems and on diverse policy domains in order to advance theoretical development as well as understanding of their key concepts and processes, and to improve methods for collecting and analyzing data in studies using them (Jones et al. 2016; Pierce et al. 2017). Although there are few critical discussions about the translation of policy theories for health and social policy in the African context (Beaussier 2017), there is emerging knowledge and theory on the nature of policy processes in specific LMIC contexts, such as in the Pacific Islands (Aiafi 2017).

Recommendations for HPSR

Based on the findings and the discussion above, we propose the following recommendations for researchers in the field of HPSR, particularly for those interested in health financing policy analysis.

Review and reflect on use of mid-range theories and conceptual frameworks

Health policy in SSA is an empirical field for public policy research, but policy theory has been marginally used to study it (Darbon et al. 2019; Erasmus et al. 2014; Jones et al. 2016; Pierce et al. 2017). As a multidisciplinary field, HPSR has the potential to make theoretical contributions to the field of public policy by applying and adapting theories to health financing policy in SSA. Such interdisciplinary cross-fertilization requires deep theoretical engagement on the part of individual HPSR researchers (Jones et al. 2017). For example,

conducting reviews of the use of individual policy theories across all areas of health policy research in LMICs may identify gaps, lessons, and implications for the field. Cairney et al.'s review of MST (2016) and Henry et al.'s review of ACF (2014) provide insights on developing criteria and methods for such reviews that could be adapted for exploring use of a policy theory in HPSR. The review and meta-analysis of Lipsky's theory of street-level bureaucrats by Erasmus (2014) is an example of this kind of learning already available. In these efforts, languages other than English must be included in search strategies for reviews and dissemination of theoretical learning for HPSR to bridge the gap in access found in our survey of authors.

While it may be untenable to expect HPSR researchers to systematically contribute to policy theory, HPSR should build a knowledge base of learning from its theoretical work. Our findings showed that there is a need for more reflexivity among researchers working with policy theories and conceptual frameworks in HPSR to critically reflect on what they learn from using it and to feedback into theoretical development at large and within the HPSR field specifically. This will require researchers using policy theory or conceptual frameworks to distinguish learning about the theory from learning about the phenomenon or the case. Reflexive thinking on theory involves "continuous reflection on a dualism between universal concepts and their specific application" (Cairney 2020)[pp. 241-242]. A more reflexive approach to the use of policy theory in health financing policy analysis would contribute to strengthening methods, improving comparisons across cases and countries, and developing theoretical tools for HPSR. According to the Association of Schools and Programs of Public Health, reflexivity is a core competency in public health and global health, which should be fostered in training programs and through peer support and mentorship in graduate study (Alexander et al. 2020; François et al. 2018).

Our findings suggest that health financing policy research can benefit from theoretical learning when researchers engage with this, but it may be rare for this learning to find its way into the public knowledge domain. The limited space available in health science journals for this kind of reflection is a structural barrier to this practice. At least, HPSR researchers should always include citations to mid-range theories or conceptual frameworks that have informed or been used in their health financing policy research and specify the reasons why they selected that theory or conceptual framework. Our findings also showed that authors use theory post-hoc to reorganize data and present results according to conceptual structures that were not operationalized for data collection. We do not make a normative judgment about this practice, which is likely common. But we suggest that authors disclose this in their methods sections so that the use of policy theory in the HPSR field can be better appraised and understood. If journals included a reflexive section in their instructions to authors for the structure of articles, this would be one way to encourage and institutionalize this.

Integrate diverse policy theory into HPSR training at graduate and post-graduate level

Policy theory and conceptual frameworks for health financing policy analysis should be introduced to HPSR trainees and early career researchers in their formal and informal education and training. In Chapter 8 of *Theories of the Policy Process* (Weible & Sabatier 2017), Heikkila and Cairney provide a useful and thorough comparison of seven key theories against three criteria: 5 core elements of theories, activeness of their research programs and coherence, and how each approach explains “the policy process” [pp. 301-327]. A number of resources provide overviews of and introductions to key theories and conceptual frameworks of policy process and policy-making for public policy in general (Cairney 2020; Weible &

Sabatier 2017) and for health policy specifically (Browne et al. 2018; Buse et al. 2012; Gilson et al. 2018; Smith & Katikireddi 2013).

Training courses and modules for HPSR in SSA are generally given within MPH programs, which can present challenges for integrating policy theory into curricula depending on the multidisciplinary capacities of human resources for teaching (Erasmus et al. 2016). While there is evidence of institutional capacity and leadership from schools of public health in health policy research in East, Central, and Southern Africa (Rabbani et al. 2016), future training efforts should not neglect the disparities in HPSR training between these sub-regions and West Africa, particularly in Francophone countries (Defor et al. 2017). For now, the open source health policy analysis course from the Collaboration for Health Policy and Systems Analysis in Africa is available in English and French (including an exercise on theory using Kingdon's MST and the policy triangle).

Network to support collaboration and develop interdisciplinary teams with political scientists

The recommendations above would benefit from networking between researchers working on health financing policy with the broader HPSR community to explore possible collaboration. There may be interest from branches of the HPSR field using policy theory to support these recommendations and pilot ideas in research and training. This could build on existing conversations about research collaboration and shared interests between political science and public health (Bekker et al. 2018; Bernier & Clavier 2011; Fafard & Cassola 2020; Gagnon et al. 2017). Networking could foster discussions on questions about barriers, training needs, and support via existing groups (ranging in formality), such as: HSG Thematic Working Groups on social science approaches and teaching/learning in HPSR, the Global Health Policy Research Forum, Emerging Voices for Global Health, the Alliance, the Collaboration

for Health Policy Systems Analysis in Africa, or the African Health Observatory – Platform on Health Systems and Policies.

Strengths and limitations of the study

First, we focus on health financing policy as a policy domain, which means that papers that use theories and conceptual frameworks of the policy process for research in other HPSR domains in Sub-Saharan Africa are not captured in this study. We suggest that policy makers’ high level of interest in health financing policy (e.g. how to develop and implement policy in this domain) justifies this focus (Bennett et al. 2020; El-Jardali et al. 2009). Also, by focusing on instruments of health financing policy (e.g. insurance), the study did not look at the large domain of public financing reforms that impact public policies for domestic financing and development assistance for health care and service delivery programs.

Second, our search strategy did not limit terms for specific policy theories used in health policy research. The decision not to earmark some theoretical terms or authors (like windows of opportunity, streams, Kingdon, advocacy coalitions, Sabatier, path dependence, Baumgartner, etc.) may have limited our results. Despite our best efforts to design and implement a systematic search strategy, this limitation regarding the search terms may explain why some papers on health financing policy analysis in SSA using public policy theory and conceptual frameworks are missing from the results. There are also limitations regarding related to the search for empirical material from the grey literature and non-indexed scientific production. Generally, scoping reviews cover a wider range of materials, with specific efforts to include grey literature. We did not include research that was not found in scientific databases, which generally excludes non-indexed journals.

Third, our study selection criteria targeted research that uses theory from a deductive perspective. This excluded studies that used theory or conceptual frameworks *ex post* to critically discuss results [see (Olivier de Sardan et al. 2015) and details in Supplemental file 1] or for triangulation or negative case analysis.

CONCLUSION

This paper sought to explore theories and conceptual frameworks that have been used to study health financing policy-making processes and policy change in SSA since 2000 and the challenges and learning from using them. The findings show a small group of policy theories and conceptual frameworks used in this area of HPSR, with little reflection on challenges and learning from their use. Drawing on a diverse range of theories can deepen our knowledge of policy processes. This will require a field-wide commitment to develop a more reflexive practice of theoretical work in HPSR, including shedding a critical eye onto our research practice and analytical lenses.

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Box 1 – List of items for data extraction

Authors
First author affiliations (institution, location)
Year of publication
Title
Journal
Study setting: Country/countries where study was conducted
Study objective / research question / statement related to policy process or change
Type of health financing policy (focus on policy area) being studied related to UHC
Research design
Data collection methods
Data analysis methods
Theory/conceptual framework used
- Name / reference
- Discipline / field / organisation of origin (e.g. political science, health policy and systems research, WHO etc.).
- How theory/conceptual framework used
Challenges (with using theory/conceptual framework)
Lessons (from using theory/conceptual framework)

Box 2: Profile of studies (n=23)

	Number
Publication year	
Papers published since 2015	12
Papers published between 2011-2014	8
Papers published between 2000-2010	3
Language of publication	
English	21
French	2
1st author institutional affiliation	
in Sub-Saharan Africa	8
outside Sub-Saharan Africa	7
both Sub-Saharan Africa and northern	8
Types of articles	
Original research papers	
- single country	19
- multiple countries/cases (comparative)	3
Reviews	1
Research design	
Qualitative methods	20
Quantitative methods	0
Mixed methods	3
Journals	
Health policy and planning	9
Health research policy and systems	2
Health Policy	2
Globalization and Health	2
BMC Health Services Research	2
Afrique Contemporaine	1
BMC Public Health	1
BMC Research notes	1
Int. Journal of Health Policy and Management	1
Sciences Sociales & Santé	1
Wider working papers	1

Figure 1 – PRISMA Flow diagram

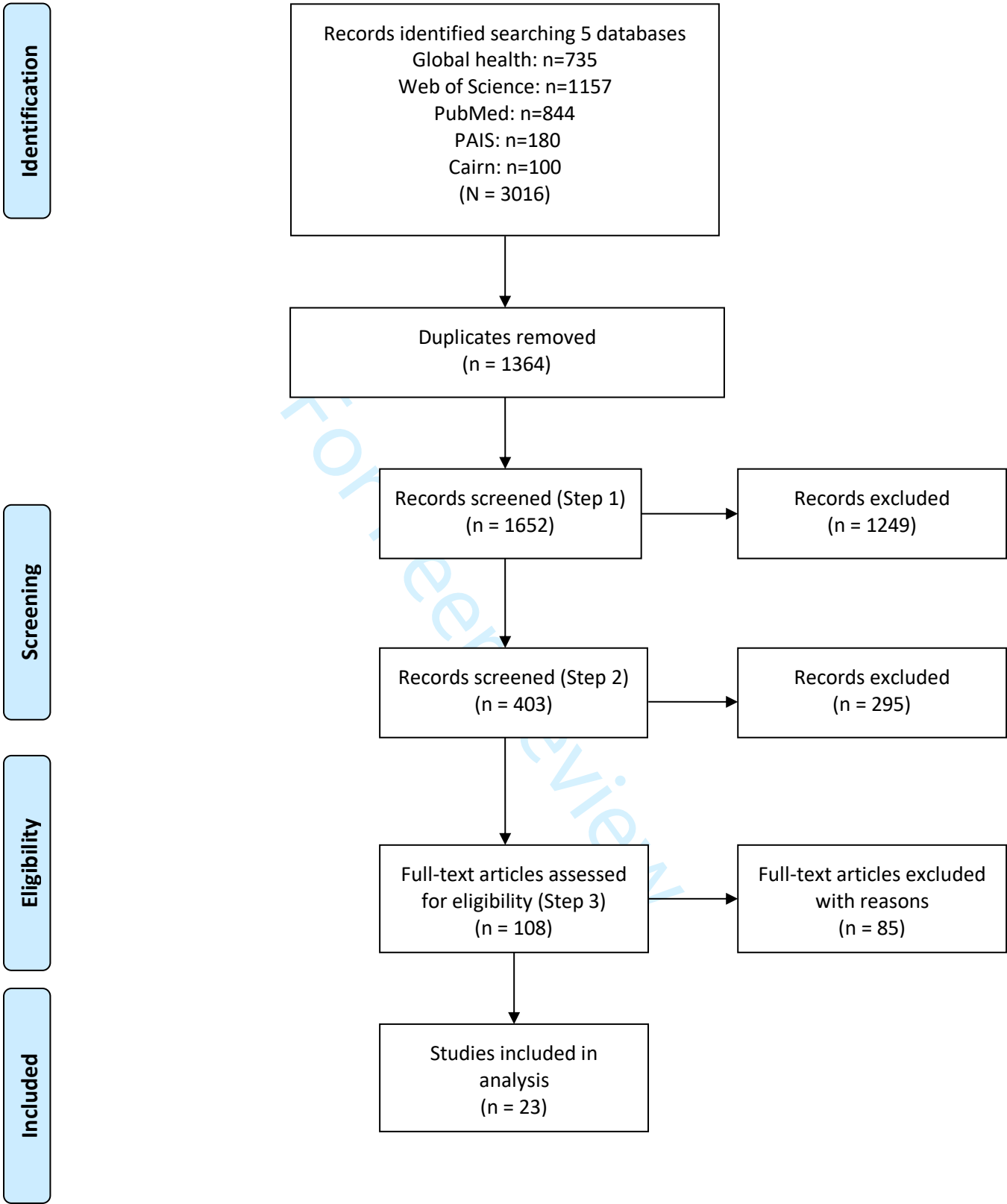


Figure 2: Articles by country of focus

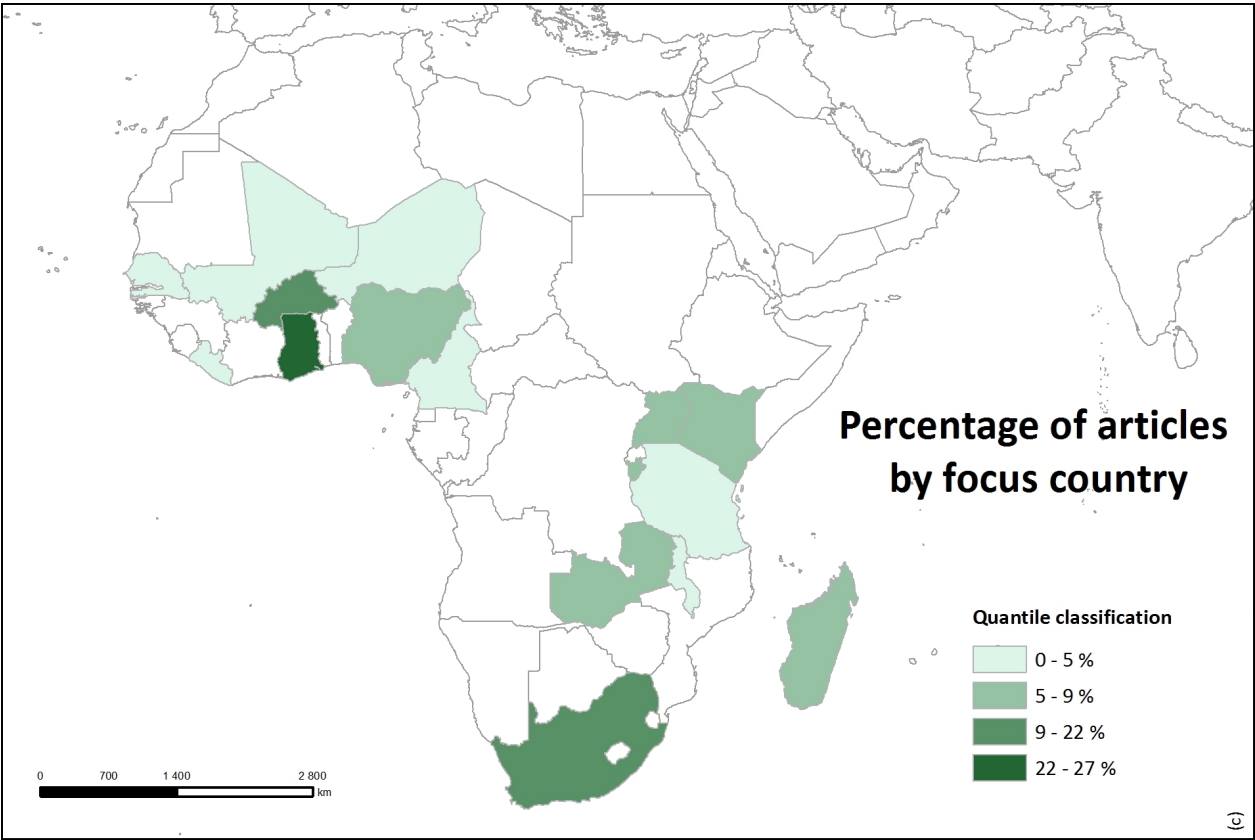


Table 1 - Search terms in English and French

<i>Dimensions of search terms</i>	<i>English</i>	<i>French</i>
<i>Databases</i>	Global Health (Ovid), PubMed, Web of Science, PAIS index	Cairn.info
1. Policy area of interest: financing policies for UHC	“universal health coverage” or “health financing” or “health finance” or “health insurance” or “health micro-insurance” or “community-based insurance” or “mutuelle” or “vouchers” or “community health fund” or “user-fee exemption” or “user-fee removal” or “conditional cash transfer” or “conditional cash payment” or “performance-based financing” or “results-based financing” or “pay-for-performance”	Couverture sanitaire universelle OU financement de la santé OU financement santé OU assurance santé OU micro-assurance OU assurance à base communautaire OU assurance de santé communautaire OU mutuelle de santé OU vouchers OU fond communautaire de santé OU fonds communautaires OU exemption des frais de santé OU gratuité des soins OU conditional cash transfer OU financement basé sur la performance OU financement basé sur les résultats OU paiement à la performance OU rémunération à la performance
AND		
2. Object of interest: policy processes and change	2a OR 2b 2a = 2ai AND 2aai 2ai (policy OR policies OR politics OR political) 2aai (problem or development or analysis or process or decision-mak* or actor* or entrepreneur* or reform* or design or frame* or instrument* or dialogue* or learning or network*) 2b (agenda-setting or emergence or formulation or adoption or implementation or evaluation or interests or ideas or institution* or discourse or framing or power or paradigm* or governance or strateg*)	politiques publiques OU politique OU politiques OU action publique OU problème OU développement OU analyse OU processus OU décideur* OU acteur* OU entrepreneur* OU réforme* OU design OU cadre d'interprétation OU instrument* OU dialogue* OU apprentissage OU réseau* OU agenda OU définition OU décision OU élaboration OU émergence OU formulation OU adoption OU mise en œuvre OU évaluation OU intérêts OU idées OU institution* OU discours OU récits OU référentiel OU pouvoir OU paradigme* OU gouvernance OU stratég*
AND		
3. Geographical scope: Sub-Saharan Africa	Angola or Benin or Botswana or “Burkina Faso” or Burundi or Cameroon or “Cape Verde” or “Cabo Verde” or “Central African Republic” or Chad or Comoros or “Côte d'Ivoire” or “Democratic Republic of Congo” or Congo or Equatorial Guinea or Eritrea or Ethiopia or Gabon or Gambia or Ghana or Guinea or Guinea-Bissau or Kenya or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Mauritius or Maurice or Mozambique or Namibia or Niger or Nigeria or Rwanda or “Sao Tome and Principe” or Senegal or Seychelles or “Sierra Leone” or Somalia or “South Africa” or “South Sudan” or Sudan or Soudan or Swaziland or Tanzania or Togo or Uganda or Zambia or Zimbabwe or “Sub-saharan Africa” or Africa or African or “low-income countries” or “lower middle-income countries”	*Category 3 was not used to search Cairn (the only Francophone database used) because it had no sophisticated search builder, and including this category frequently turned out 0 results when combined with categories 1 and 2.

Table 2 – Inclusion and exclusion criteria

Criteria	Applied to title and abstract screening to select relevant studies (stages 1 and 2)	Applied to full text screening for eligibility (stage 3)
Inclusion	<p>Scientific & grey literature published between 2000-2017, in English or French. Empirical research material on HF policies for UHC in SSA.</p> <p>Studies about policy environment, policy context, policy design, policy processes, policy change, or politics of policy change related to HF policies for UHC.</p> <p>Policy studies including analysis of ideas and experiences of stakeholders in decision-making related to policy design, policy processes, or policy change.</p>	<p>Presence of policy process or health policy-related mid-range theory or conceptual framework <i>ex ante</i>.</p> <p>Studies of countries in Sub-Saharan Africa (including upper-middle income countries).</p>
Exclusion	<p>Conference proceedings, position/opinion/advocacy papers, commentaries, editorials, institutional reports, PhD theses, study protocols.</p> <p>Studies that only estimate or evaluate effects on coverage, expenses, financial protection, or quality/access/delivery of HC and services (effectiveness studies/evaluations).</p> <p>Studies on SES factors and/or knowledge, attitudes, beliefs, motivations and other determinants of HC seeking-behaviour or health insurance enrolment/participation, or practices of users or service providers (HC and services or clinical research w/o link with an implemented policy).</p> <p>Studies on preferences, perceptions, and awareness of users and stakeholders about HF policies and HC.</p> <p>Studies on health economics, health spending trends, economic efficiency/cost effectiveness, expenditure analyses, or modelling.</p>	<p>Presence of theory or framework <i>ex poste</i>.</p> <p>Frameworks announced but none referred to explicitly (no reference from the literature).</p> <p>Frameworks without any empirical application.</p> <p>Theory-driven evaluation (intervention theory and logic models for policy evaluation).</p>

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Table 3 – Definitions of theories and frameworks
Adapted from Ridde, Pérez & Robert (Ridde et al. 2020)

<div>Low</div> <div>Scale of abstraction</div> <div>High</div>	Conceptual framework	A structure, schema, or system of categories to describe empirical phenomena without providing explanations for them. (Nilsen 2015)
	Programme theory	The hypotheses used to underpin a program’s design, which people use knowingly or not. (Weiss 1997)
	Mid-range theory	"A basic structure of ideas, which can be operationalized." (Stinchcombe, 1968, quoted by Moore et al., 2012) “Theories of the middle range should be informed by empirical data but be generalizable to a wide range of situations and widely recurrent patterns that occur in different contexts.” (2002)
	Grand theory	A unifying theory that explains all the observed uniformities of social behavior, social organization, and social change. (Merton 1968)

Table 4: Theories and conceptual frameworks – disciplinary origins, sites of use, policy instruments of study, and types of research questions

Papers analyzed	Mid-range theory (MT) / Conceptual Framework (CF)	Freq.	%	Main MT/CF reference(s)	Additional MT/CF reference(s)	Country/ies of empirical study	HF strategy/ instrument*	Research question
Mid-range Theories		5	22%					
Kingdon (MST)		3	60%					
Kadio et al. 2017				Ridde 2007; Kingdon 1984	Lemieux 2002	Burkina Faso	UFE	explanatory
Sieleunou et al. 2017				Kindgon 2010		Cameroun	PBF	exploratory
Zida et al. 2017				Kindgon 2011		Burkina Faso	PBF	exploratory
Sabatier (ACF)		1	20%					
Atuoye et al. 2016				Sabatier 1987	Russell et al. 2014; Dunn 1981, Pielke 2007	Ghana	NHI	exploratory
Principal-agent theory		1	20%					
Honda 2015				Pritchette & Woolcock 2004; Milgrom & Roberts 1992		Madagascar	UFE	explanatory
Conceptual frameworks		10	43%					
policy triangle		4	40%					
Abuya et al. 2012				Walt & Gilson 1994	Erasmus & Gilson 2008	Ghana	S/V	exploratory
Meessen et al. 2011				Hercot et al. 2011 (based on Walt & Gilson)		Burkina Faso, Burundi, Ghana, Liberia, Senegal, Uganda	UFE	exploratory
Onoka et al. 2013				Walt & Gilson 1994		Nigeria	NHI	explanatory
Thomas & Gilson 2004				Walt & Gilson 1994	Eden 1996	South Africa	SHI	exploratory
stages heuristic/policy cycle		2	20%					

1	Olivier de Sardan &		Lemieux 2002		Burkina Faso, Mali,	UFE	exploratory
2	Ridde 2012				Niger		
3	Ridde & Morestin 2011		Ridde 2009;		Ghana, Kenya,	UFE	exploratory
4			Sabatier 1999		Madagascar, South		
5					Africa, Uganda		
6							
7		new institutionalism	1	10%			
8	Bertone & Meessen		North 1990;		Burundi	PBF	explanatory
9	2013		Aoki 2001,				
10			2007; Barzel				
11			1997; Laffont				
12			and Martimort				
13			2002				
14		political economy of policy	1	10%			
15		reform in LMIC					
16							
17	Agyepong & Adje 2008		Grindle &		Ghana	NHI	exploratory
18			Thomas 1991				
19							
20		policy translation	1	10%			
21	Fusheini et al. 2017		Stone 2012;		Ghana	NHI	exploratory
22			Stone 2010;				
23			Stone 2004				
24		normative (HF systems)	1	10%			
25	van den Heever 2016		Kutzin 2010		South Africa	NHI	exploratory
26							
27							
28							
29		Bricolage	8	35%			
30		political science ++	4	50%			
31	Chimhutu et al. 2015	<i>partnership</i>	Crawford 2003	Grindle & Thomas	Tanzania	PBF	exploratory
32				1991			
33	Koduah 2016	<i>resistance + power + conflict</i>	Sterman 2006;		Ghana	NHI	explanatory
34			Mintzberg 1983;				
35			Grindle &				
36			Thomas 1991				
37	Pillay & Skordis-	<i>interacting trends & shocks</i>	Hall et al. 1975;	Grindle & Thomas	South Africa	NHI	explanatory
38	Worrall 2013		Kingdon 2003	1991			
39							
40	Pruce & Hickey 2016	<i>political settlement</i>	Lavers & Hickey	Schmidt 2008; Stone	Zambia	SHI, CT	explanatory
41			2016	2008			
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HPSR ++		3 38%				
Gilson et al. 2003	<i>policy triangle + political economy + power</i>	Walt & Gilson 1994	Gilson et al. 1999; Kingdon 1984; Zaharadis 1999; Grindle & Thomas 1991; Porter 1995; Reich 1996	South Africa, Zambia	UFE, SIH, UF	exploratory
Ridde et al. 2011	<i>policy triangle + stages heuristic</i>	Walt et al. 2008; Hercot et al. 2011	Lemieux 2002; Presseman & Wildavsky 1984; Grindle & Thomas 1991	Burkina Faso	S/V	exploratory
Onoka et al. 2015	<i>punctuated equilibrium theory + policy triangle</i>	Buamgartner & Jones 1993; Walt & Gilson 1994		Nigeria	NHI	explanatory
implementation science		1 13%				
Wilhelm et al. 2016	<i>acceptability + adoption</i>	Proctor et al. 2011; Peters et al. 2013		Malawi	UFE	exploratory

Discipline/origin of MT/CF	Name of MT/CF
Political science	Advocacy coalitions (ACF) Multiple streams theory (MST) Policy translation Political economy of health reform Stages heuristic (policy cycle) Combination of MT or CF from political science (<i>bricolage</i>)
Health policy & systems research (HPSR)	Policy triangle (health policy analysis framework)
Economics	New institutionalism Principal-agent theory
Implementation science	Implementation science framework

1	Combination of political	Combination of MT or CF from
2	science and health policy	HPSR + political science
3	& systems research	(<i>bricolage</i>)

5 **Legend for HF strategy / instrument***

6	National health	NHI
7	insurance	
8	User fee exemption	UFE
9	Performance-based	PBF
10	financing	
11	Subsidy/voucher for	SV
12	reproductive health	
13	Social health insurance	SHI
14	Cash transfers	CT
15	User fees / pre-payment	UF

For Peer Review

Supplemental file 1 - Detailed reasons for excluding relevant articles from analysis

Reasons for studies excluded from eligibility for analysis	N	References
Theory and conceptual framework criteria		
1. Absence of theory or conceptual framework orienting the study		
1.1 No theory or conceptual framework	34	(1-34)
1.2 Mention application of theory or conceptual framework but none cited	3	(35-37)
1.3 Tools and methods for categorising actors and stakeholders	5	(38-42)
1.4 Grounded-theory or critical interpretive approach explicit in design	3	(43-45)
2. Presence of theory or conceptual framework		
2.1 Theory or conceptual framework <i>ex poste</i>	1	(46)
2.2 Theory or conceptual framework without empirical application (e.g. only illustration)	5	(47-51)
2.3 Intervention theory-driven evaluation (intervention theory, programme logic models, theories of change)	6	(52-57)
3. Out of scope of review (geographical scope or policy analysis)		
3.1 outside of Sub-Saharan Africa	6	(58-63)
3.2 unrelated to HF policy	1	(64)
3.3 analysis of HF policy effects w/o analysis of policy processes (most were excluded in Tier 2 screen)	1	(65)
3.4 does not meet inclusion criteria as policy analysis or research on policy processes and change	2	(66, 67)
4. Not empirical material		
4.1 Insufficient methods to determine whether empirical work or not	3	(68-70)
4.2 Debate	1	(71)
4.3 Proceedings	1	(72)
5. Study focus (meet exclusion criteria from step 1 screening)		
5.1 Studies that only estimate or evaluate impact (effects) on coverage, expenses, financial protection, or quality/access/delivery of health care and services (effectiveness studies/evaluations) – outcomes and results focused	4	(73-76)
5.2 Studies on SES factors and/or knowledge, attitudes, beliefs, motivations and other determinants of health care seeking-behaviour or health insurance enrolment /participation, or practices of users or service providers, without any link with an implemented policy	1	(77)
5.3 Studies on preferences, perceptions, and awareness of users, stakeholders, or experts about health financing policies and health care	4	(78-81)
5.4 Studies on health economics, health spending trends, economic efficiency/cost effectiveness, expenditure analyses, or modelling		
5.5 Health care and services or clinical research (factors for use of services, quality improvement, health system and organisation performance, et cetera)	1	(82)
6. Could not access full text	3	(83-85)
TOTAL excluded from analysis after full text screening	85	

Supplemental file 2 – Overview of three most used theories and conceptual frameworks in results

Main citation	Kingdon JW. <i>Agendas, alternatives and public policies</i> , 2nd ed. Boston: Little, Brown and Company; 1984. (multiple editions published 2003-2013)
Discipline and context of development	Political science, USA – developed from study of agenda-setting in United States federal government How do issues become problems for public policy and receive attention of policy-makers?
Level of analysis	Policy systems (macro level)
Key elements	<i>Problem</i> stream: The issues that decision-makers and citizens want to address (acknowledging that all the issues do not become problems). Indicators, values, significant events, feedback from existing or previous programs, and the number of problems (“load”) that are carried in this stream can strain the limited attention of decision-makers. <i>Policies</i> stream: A mix of competing ideas, proposed by experts from networks and policy communities, of which the likelihood of becoming a potential solution depends on the alignment with values (acceptability) and technical ability (feasibility) for implementation. <i>Politics</i> stream: National public opinion, interest groups, and the stability and change in the administrative and legislative branches of government. <i>Windows of opportunity</i> are created by coupling the three currents at critical moments, which are opportunities for convergence that are seized by <i>policy entrepreneurs</i> to advance and promote adoption of their ideas.
Conditions and assumptions	The public policy decision-making environment is ambiguous. Defining problems is difficult. It is also difficult to know decision-makers’ preferences because their choices represent reinterpretations of situations, rather than a specific solution. 1) There is capacity at the policy system level to manage parallel decision-making processes (in multiple sub-systems), but capacity of individuals for this is limited. 2) Decision-makers operate under time constraints, where issues are competing for their attention (little time to act and to consider the alternative choices when in the face of an urgent situation). 3) The three streams are independent.

Main citation	Grindle MS, Thomas JW. Public choices and policy change: the political economy of reform in developing countries. Baltimore: John Hopkins University Press; 1991. (in article form, see: <i>Policy Sciences</i> 22: 213-248, 1989.)
Discipline and context of development	Political science, USA - for understanding policy reform in developing countries How, why, when do changes occur in public policies and institutions? (setting the agenda, formulation, implementation)
Level of analysis	Reforms within a government, focusing on factors that influence elites (policy-makers)
Key elements	<i>Environmental Context</i> : Individual attributes and trajectories of elite (ideologies, expertise, training, positions, power resources, political and institutional loyalty, memory of similar situations). <i>Circumstances of agenda-setting</i> : In a period when the elites perceive a “crisis”, they are more concerned by macro issues (legitimacy, social stability, national interests, including economic, the regime in power). Otherwise, in a “politics as usual” period, elites focus on micro issues (administrative, careers, budgets, procedures, government power, coalition-building). <i>Characteristics of the policy</i> : According whether a period is perceived as “crisis” or “politics as usual”, conflict arenas are either public in the former (high-risk stakes of the viability of the government) or bureaucratic in the latter (low-risk stakes, essentially background of the reform). These arenas require different resources.
Conditions and assumptions	Bureaucratic approach, centered on the state. 1) Elites (decision-makers, managers) play important roles in defining policy and institutional changes, but the context limits the options available to them. 2) The circumstances surrounding the reform influence the dynamics and decision-making process. In particular, periods of “crisis” differ from periods of “politics as usual” in the way that the reform is deliberated as well as timing, the officials / elected officials involved, and the issues. 3) The characteristics of a reform are determinant of the conflict / opposition around implementation, so implementation can strongly modify a policy.

Citation	Walt G, Gilson L: Reforming the health sector in developing countries: the central role of policy analysis. Health Policy and Planning; 1994, 9(4):353–370.
Discipline and context of development	Interdisciplinary, UK – health policy analysis, low-, lower-middle, and middle-income countries What are the processes of health policies? (framework for decision process research and implementation planning)
Level of analysis	Flexible, open (health policy processes at all levels from local to international, and within or across organizations, or other groups, networks, or system / subsystem)
Key elements	<u>Actors</u> : These are individuals and groups (state, bureaucratic, private / public, civil sector) involved in policy processes (international, national, sub-national, and local). <u>Context</u> : The political environment (materials, structural, cultural, social, scientific, international). <u>Process</u> : How policies are initiated, negotiated, developed, formulated, adopted, funded, communicated, implemented, evaluated, modified. <u>Content</u> : The propositions, the issues, the interpretive frames, the discourse, the symbols / images.
Conditions and assumptions	The policy process is a set of interrelated elements (content, actors, context, and process). The "health policy triangle" with actors in the center is a representation of these factors that can influence policies and that should be considered systematically and in relation to others (not in isolation).